Dorset County Hospital
NHS Foundation Trust

Dorset County Hospital Publications
April 2021-March 2022

Please find below a list of the publications of staff employed by Dorset County Hospital NHS Foundation Trust between April 2021 and March 2022. If you would like to see full text versions of any of the articles please contact library.office@dchft.nhs.uk

Articles selected by Morag Evans, Librarian, Dorset County Hospital
Google scholar alert – "*dorset county hospital*"

1: Agrawal R, Tso S, Eltigani EA, Busam KJ, Taibjee SM, Carr RA. PRAME immunohistochemistry as an adjunct in the diagnosis of paucicellular lentigo maligna in a young man. Br J Dermatol. 2021 Apr;184(4):e122. doi: 10.1111/bjd.19599. Epub 2020 Nov 2. PMID: 33140433.
No abstract available.

2: Avery P, Cleaver N. Managing capability in specialist nursing practice. Nurs Manag (Harrow). 2021 Apr 1;28(2):29-32. doi: 10.7748/nm.2021.e1963. Epub 2021 Mar 2. PMID: 33650345.
Abstract
Raising concerns over another nurse's clinical practice and capability presents significant challenges, particularly in specialist clinical nursing roles. However, the support provided to nurses who raise such concerns is not always optimal. While compassionate leadership in healthcare has been stated as a priority to develop safer workplaces for staff, it must be balanced against the need to manage staff undergoing capability management processes. This article discusses how enhanced training and support for both line managers and staff can improve the capability management processes.

3: Avery P. Using e-health tools and PROMs to support self-management in patients with inflammatory bowel disease. Br J Nurs. 2021 Apr 8;30(7):394-402. doi: 10.12968/bjon.2021.30.7.394. PMID: 33830794.
Abstract
Abstract
Background: The use of digital health or e-health is growing. The potential positive impact on IBD care from supported self-management using these tools emerged from a literature review carried out in preparation for a service improvement project. A patient-reported outcomes measure (PROM) with validation across IBD sub-types was already available for use. This internationally recognised tool has potential for use with existing or new e-health systems.

Aims: In order to test the concept of using PROMs to support practice and follow up a small-scale pilot study was designed. The aim of the study was to understand if empowering patients to

undertake supported self-management could lead in turn to improved flow through outpatient services.

Methods: An audit was carried out of PROMs looking at quality of life (QoL) as well as disease activity using an electronic platform in real time at the point of patient contact. The disease activity indices used were the Harvey Bradshaw Index and the Simple Clinical Colitis Activity Index, due to the author's familiarity with these tools.

Results: Of the 15 participants, 10 reported themselves as 'well' or 'well with questions' all participants reported an acceptance of supported remote self-management using e-health.

Conclusion: This evaluation led to PROMs being captured on a tablet in the outpatient setting in the pre-pandemic period. Allowing patients to use the PROM as a tool in the outpatient setting has led to longitudinal data being added to the e-health system for each individual. Well patients could be managed remotely, freeing capacity in outpatient clinics.

4: Body S, Ligthart MAP, Rahman S, Ward J, May-Miller P, Pucher PH, Curtis NJ, West MA, Airofarulla C, Alder L, Baylem N, Berry D, Benjafield A, Bhuvanakrishna T, Bond A, Booth R, Broadhurst J, Byrne JP, Carten R, Chambler D, Davis H, Edwards MR, Froggatt P, Francis N, Grocott MPW, Lee GH, Levett DZH, Hickish C, Howse F, Kangesu P, Khawaja Z, Lee J, Lee C, McLachlan J, Mercer S, Mirnezami AH, Moran B, Jones VM, Nicholls K, Damink SWMO, Pearson K, Primrose JN, Robinson P, Sorensen E, Stubbs BM, Suhail N, Toh S, Terry M, Tzivanakis A, Underwood TJ; Wessex Research Collaborative^; ^Wessex Research Collaborative contributors to be cited as collaborative co-authors. Sarcopenia and Myosteatosis Predict Adverse Outcomes After Emergency Laparotomy: A Multi-Centre Observational Cohort Study. Ann Surg. 2021 Feb 25. doi: 10.1097/SLA.0000000000004781. Epub ahead of print. PMID: 33914486.

Abstract

Objective: To determine the relationship between body composition (BC), specifically low skeletal muscle mass (sarcopenia) and poor muscle quality (myosteatosis) and outcomes in emergency laparotomy patients.

Background: Emergency laparotomy has one of the highest morbidity and mortality rates of all surgical interventions. BC objectively identifies patients at risk of adverse outcomes in elective cancer cohorts, however evidence is lacking in emergency surgery.

Methods: An observational cohort study of patients undergoing emergency laparotomy at ten English hospitals was performed. BC analyses were performed at the third lumbar vertebrae level using pre-operative CT images to quantify skeletal muscle index (SMI) and skeletal muscle radiation attenuation (SM-RA). Sex-specific SMI and SM-RA were determined, with the lower tertile splits defining sarcopenia (low SMI) and myosteatosis (low SM-RA). Accuracy of mortality risk prediction, incorporating SMI and SM-RA variables into risk models was assessed with regression modelling.

Results: Six hundred and ten patients were included. Sarcopenia and myosteatosis were both associated with increased risk of morbidity (52.1% vs. 45.1%, p = 0.028; 57.5% vs. 42.6%, p = 0.014), 30-day (9.5% vs. 3.6%, p = 0.010; 14.9% vs. 3.4%, p < 0.001), and 1-year mortality (27.4% vs. 11.5%, p < 0.001; 29.7% vs.12.5%, p < 0.001). Risk-adjusted 30-day mortality was significantly increased by sarcopenia (OR 2.56 (95%CI 1.12-5.84), p = 0.026) and myosteatosis (OR 4.26 (2.01-9.06), p < 0.001), similarly at 1-year (OR 2.66 (95%CI 1.57-4.52), p < 0.001; OR 2.08 (95%CI 1.26-3.41), p = 0.004). BC data increased discrimination of an existing mortality risk-prediction model (AUC 0.838, 95%CI 0.835-0.84).

Conclusion: Sarcopenia and myosteatosis are associated with increased adverse outcomes in emergency laparotomy patients.

5: Bradbury AW, Davies AH, Dhesi JK, Hammond CJ, Hampshire M, Jellett K,

Lindridge J, Pichel AC, Ribbons T, Ruffell L, Slater M, Smith AH, Trender H,

Tang S, Wilson NV. Recommendations on the Use of Open Surgical and Endovascular Aneurysm Repair for the Management of Unruptured Abdominal Aortic Aneurysm from the Guideline Development Committee Appointed by the UK National Institute for Health and Care Excellence. Eur J Vasc Endovasc Surg. 2021 Jun;61(6):877-880. doi: 10.1016/j.ejvs.2021.01.047. Epub 2021 Mar 6. PMID: 33685761.
No abstract available.

6: Burchell VJ, Arblaster G, Buckley D, Wheat J. Is a Depth Camera in Agreement

with an Electromagnetic Tracking Device when Measuring Head Position? Br Ir

Orthopt J. 2021 Nov 15;17(1):142-149. doi: 10.22599/bioj.227. PMID: 34870093;

PMCID: PMC8603860.

Abstract

Introduction: Clinicians typically observe and describe abnormal head postures (AHPs) and may also measure them. Depth cameras have been suggested as a reliable measurement device for measuring head position using face-tracking technology. This study compared a depth camera (Microsoft Kinect) to a gold standard electromagnetic tracking system (Polhemus device) to measure head position.

Method: Twenty healthy volunteers (mean age 21 years) had their head position simultaneously recorded using the depth camera (Kinect) and the electromagnetic tracking system (Polhemus). Participants were asked to make 30-degree head movements into chin up, chin down, head turn and head tilt positions. The head movement made and the stability of the head at each position were recorded and analysed.

Results: Compared to the electromagnetic tracking system (Polhemus), the depth camera (Kinect) always measured a smaller head movement. Measurements with the two devices were not statistically significantly different for turn right (P = 0.3955, p > 0.05), turn left (P = 0.4749, p > 0.05), tilt right (P = 0.7086, p > 0.05) and tilt left (P = 0.4091, p > 0.05) head movements. However, the smaller depth camera measurement of chin up and chin down head movements were statistically significant, chin up (P = 0.0001, p < 0.01) and chin down (P = 0.0005, p < 0.001). At each eccentric position, the depth camera (Kinect) recordings were more variable than the electromagnetic tracking system (Polhemus).

Conclusions: Compared to the electromagnetic tracking system (Polhemus), the depth camera (Kinect) was comparable for measuring head turns and tilts but was less accurate at measuring chin up and chin down head positions. Further research is needed before the depth cameras are considered for clinical recordings of head position

7: Burden-Teh E, Murphy R, Gran S, Nijsten T, Hughes C, Abdul-Wahab A, Bewley A, Burrows N, Darne S, Gach JE, Katugampola R, Jury CS, Kuet K, Llewellyn J, McPherson T, Ravenscroft JC, Taibjee S, Wilkinson C, Thomas KS. Identifying the best predictive diagnostic criteria for psoriasis in children (< 18 years): a UK multicentre case-control diagnostic accuracy study (DIPSOC study). Br J Dermatol. 2022 Feb;186(2):341-351. doi: 10.1111/bjd.20689. Epub 2021 Nov 24. PMID: 34477218.

Abstract

Background: In children, psoriasis can be challenging to diagnose. Difficulties arise from differences in the clinical presentation compared with adults.

Objectives: To test the diagnostic accuracy of previously agreed consensus criteria and to develop a shortlist of the best predictive diagnostic criteria for childhood psoriasis.

Methods: A case-control diagnostic accuracy study in 12 UK dermatology departments (2017-2019) assessed 18 clinical criteria using blinded trained investigators. Children (< 18 years) with dermatologist-diagnosed psoriasis (cases, N = 170) or a different scaly inflammatory rash (controls, N = 160) were recruited. The best predictive criteria were identified using backward logistic regression, and internal validation was conducted using bootstrapping.

Results: The sensitivity of the consensus-agreed criteria and consensus scoring algorithm was 84·6%, the specificity was 65·1% and the area under the curve (AUC) was 0·75. The seven diagnostic criteria that performed best were: (i) scale and erythema in the scalp involving the hairline, (ii) scaly erythema inside the external auditory meatus, (iii) persistent well-demarcated erythematous rash anywhere on the body, (iv) persistent erythema in the umbilicus, (v) scaly erythematous plaques on the extensor surfaces of the elbows and/or knees, (vi) well-demarcated erythematous rash in the napkin area involving the crural fold and (vii) family history of psoriasis. The sensitivity of the best predictive model was 76·8%, with specificity 72·7% and AUC 0·84. The c-statistic optimism-adjusted shrinkage factor was 0·012.

Conclusions: This study provides examination- and history-based data on the clinical features of psoriasis in children and proposes seven diagnostic criteria with good discriminatory ability in secondary-care patients. External validation is now needed.

8: Cordell HJ, Fryett JJ, Ueno K, Darlay R, Aiba Y, Hitomi Y, Kawashima M, Nishida N, Khor SS, Gervais O, Kawai Y, Nagasaki M, Tokunaga K, Tang R, Shi Y, Li Z, Juran BD, Atkinson EJ, Gerussi A, Carbone M, Asselta R, Cheung A, de Andrade M, Baras A, Horowitz J, Ferreira MAR, Sun D, Jones DE, Flack S, Spicer A, Mulcahy VL, Byan J, Han Y, Sandford RN, Lazaridis KN, Amos CI, Hirschfield GM, Seldin MF, Invernizzi P, Siminovitch KA, Ma X, Nakamura M, Mells GF; PBC Consortia; Canadian PBC Consortium; Chinese PBC Consortium; Italian PBC Study

Group; Japan-PBC-GWAS Consortium; US PBC Consortium; UK-PBC Consortium. An international genome-wide meta-analysis of primary biliary cholangitis: Novel risk loci and candidate drugs. J Hepatol. 2021 Sep;75(3):572-581. doi: 10.1016/j.jhep.2021.04.055. Epub 2021 May 23. Erratum in: J Hepatol. 2022 Feb;76(2):489. PMID: 34033851; PMCID: PMC8811537.
No abstract available.

9: Cordell HJ, Fryett JJ, Ueno K, Darlay R, Aiba Y, Hitomi Y, Kawashima M, Nishida N, Khor SS, Gervais O, Kawai Y, Nagasaki M, Tokunaga K, Tang R, Shi Y, Li Z, Juran BD, Atkinson EJ, Gerussi A, Carbone M, Asselta R, Cheung A, de Andrade M, Baras A, Horowitz J, Ferreira MAR, Sun D, Jones DE, Flack S, Spicer A, Mulcahy VL, Byun J, Han Y, Sandford RN, Lazaridis KN, Amos CI, Hirschfield GM, Seldin MF, Invernizzi P, Siminovitch KA, Ma X, Nakamura M, Mells GF; PBC Consortia; Canadian PBC Consortium; Chinese PBC Consortium; Italian PBC Study Group; Japan-PBC-GWAS Consortium; US PBC Consortium; UK-PBC Consortium. Corrigendum to 'An international genome-wide meta-analysis of primary biliary cholangitis: Novel risk loci and candidate drugs' [J Hepatol 2021;75(3):572-581]. J Hepatol. 2022 Feb;76(2):489. doi: 10.1016/j.jhep.2021.11.015. Epub 2021 Dec 9. Erratum for: J Hepatol. 2021 Sep;75(3):572-581. PMID: 34895949; PMCID: PMC8935376.
No abstract available.

10: Dashora U, Gregory R, Winocour P, Dhatariya K, Rowles S, Macklin A, Rayman G, Nagi D, Whitehead K, Beba H, De P, Patel DC; ABCD executive committee and Diabetes UK. Association of British Clinical Diabetologists (ABCD) and Diabetes UK joint position statement and recommendations for non-diabetes specialists on the use of sodium glucose co-transporter 2 inhibitors in people with type 2 diabetes (January 2021). Clin Med (Lond). 2021 May;21(3):204-210. doi: 10.7861/clinmed.2021-0045. PMID: 34001571; PMCID: PMC8140708.
Abstract
Sodium glucose co-transporter 2 (SGLT2) inhibitors are now an established class of medications for the treatment of type 2 diabetes (T2D), no longer reserved for use by specialists in diabetes. They are being used increasingly for their cardiac and renal benefits by primary care, cardiology and renal teams for indications in parallel with diabetes care as part of holistic management. This guidance provides essential information on SGLT therapy, including the main advantages and the important risks of which healthcare professionals should be aware.

11: Di Matteo A, Cipolletta E, Destro Castaniti GM, Smerilli G, Airoldi C, Aydin SZ, Becciolini A, Bonfiglioli K, Bruns A, Carrara G, Cazenave T, Ciapetti A, Cosatti MA, de Agustin JJ, Di Carlo M, Di Donato E, Di Geso L, Duran E, Elliott A, Estrach C, Farisogulları B, Fiorenza A, Fodor D, Gabba A, Hernández-Díaz C, Huang F, Hurnakova J, Li L, Jesus D, Karadag O, Martire MV, Massarotti M, Michelena X, Musca AA, Nair J, Okano T, Papalopoulos I, Rosemffet M, Rovisco J,

Rozza D, Salaffi F, Satulu I, Scioscia C, Scirè CA, Sun F, Tamas MM, Tanimura S, Ventura-Rios L, Voulgari PV, Vreju FA, Vukatana G, Wong E, Yang J, Zacariaz Hereter J, Zanetti A, Grassi W, Filippucci E. Reliability assessment of the definition of ultrasound enthesitis in SpA: results of a large, multicentre, international web-based study. Rheumatology (Oxford). 2022 Mar 16:keac162. doi: 10.1093/rheumatology/keac162. Epub ahead of print. PMID: 35293988.

12: Edmond M, Nenclares P, Harrington K, Ap Dafydd D, Bagwan I, Begg D, Lingley K, Patterson G, Payne M, Steven N, Turnbull N, Yip K, Silva P, Kerawala C, Paleri V, King E. What is the role of the surgeon in the management of head and neck mucosal melanoma in the immunotherapy era? Head Neck. 2021 Nov;43(11):3498-3503. doi: 10.1002/hed.26849. Epub 2021 Aug 28. PMID: 34453460.

Abstract

Introduction: The advent of immunotherapy has impacted both the management and, to a lesser extent, the outcomes for patients with head and neck mucosal melanoma. As a consequence, one might expect that the role of the surgeon would be limited to the diagnostic work-up and that systemic therapies would be the mainstay of treatment.

Methods and results: Here, we present the surgical aspects of the recently published United Kingdom Head and Neck Mucosal Melanoma Guideline to highlight the continued role of surgeons in the management of this disease. We highlight key areas where surgeons remain the lead clinician and reinforce the multidisciplinary requirement for exemplary patient care.

Conclusions: Despite the advent of immunotherapy, surgeons continue to have a key role to play in this disease. When indicated, it is essential that appropriate surgery is offered by a suitably experienced team.

13: Elliott K. Cardiac pacing: principles, interventions and patient support. Nurs Stand. 2022 Feb 2;37(2):76-82. doi: 10.7748/ns.2022.e11881. Epub 2022 Jan 31. PMID: 35098707.

Abstract

Cardiac pacing is used to treat a variety of heart rhythm irregularities or arrhythmias, most commonly bradyarrhythmia, which is characterised by an abnormally slow heart rate. Temporary and permanent pacemakers work by sending intermittent electric impulses to the heart muscle, stimulating it to contract and ensuring a steady heart rate. This article explains the various temporary and permanent cardiac pacing interventions, describes how pacemakers work, outlines the complications that can arise from their use and details the needs of patients in terms of information, support, monitoring and follow-up.

14: Emile SH, Hamid HKS, Khan SM, Davis GN. Rate of Application and Outcome of Non-operative Management of Acute Appendicitis in the Setting of COVID-19: Systematic Review and Meta-analysis. J Gastrointest Surg. 2021 Jul;25(7):1905-1915. doi: 10.1007/s11605-021-04988-1. Epub 2021 Mar 26. PMID: 33772399; PMCID: PMC7997536.

Abstract

Background: Non-operative management (NOM) of acute appendicitis has been assessed in several studies before COVID-19 pandemic. This systematic review aimed to assess the extent of adoption, efficacy, and safety of NOM of acute appendicitis in the setting of COVID-19.

Methods: This was a PRISMA-compliant systematic review of the literature. Electronic databases and Google Scholar were queried for studies that applied NOM of acute appendicitis during COVID-19. The main outcome measures were the rates of NOM application during the pandemic as compared to the pre-pandemic period, failure and complication rates of NOM. Failure was defined as the need for appendectomy during NOM and complications included development of appendicular mass or abscess.

Results: Fourteen studies (2140 patients) were included. The male to female ratio was 1.44:1 and median age was 34. Nine hundred fifty-nine (44.8%) patients had a trial of NOM. The weighted mean rate of NOM application was 50.1% (95%CI: 29.8-70.5%). The application of NOM during the pandemic was significantly more likely than its application before COVID-19 (OR = 6.7, $p < 0.001$). The weight mean failure rate of NOM was 16.4% (95%CI: 9.4-23.4). NOM failure was more likely in children and patients with complicated appendicitis. The weighted mean complication rate after NOM was 4.5% (95%CI: 1.4-7.7). NOM had significantly lower odds for complications than appendectomy (OR = 0.36, $p = 0.03$). There was no mortality after application of NOM.

Conclusion: NOM of acute appendicitis in the setting of COVID-19 may be a safe, short-term alternative to surgery with acceptably low failure and complication rates.

15: Emmanuel A, Phillips G. Seeing what others see while thinking what others have not. Clin Med (Lond). 2021 Nov;21(6):e559-e560. doi: 10.7861/clinmed.ed.21.6.1. PMID: 34862212; PMCID: PMC8806308.

No abstract available

16: Garefis K, Tarazis K, Gkiouzelis K, Kipriotou A, Konstantinidis I, Markou K. Multiple Tracheal Diverticula in a COVID-19 Positive Patient. Ear Nose Throat J. 2021 Jul 19:1455613211034602. doi: 10.1177/01455613211034602. Epub ahead of print. PMID: 34281404.

Abstract

A tracheal diverticulum is a type of paratracheal air cyst and is usually an incidental finding after a computed tomography scan of the neck and thorax. With an incidence between 1% and 4% in adults, tracheal diverticula are rare entities that can be symptomatic in certain cases. We present a case of a COVID-19 positive patient who presented to our hospital and was diagnosed with multiple tracheal diverticula during his hospitalization.

17: Hamid HKS, Ahmed AY, Alhamo MA, Davis GN. Efficacy and Safety Profile of Rectus Sheath Block in Adult Laparoscopic Surgery: A Meta-analysis. J Surg Res. 2021 May;261:10-17. doi: 10.1016/j.jss.2020.12.003. Epub 2020 Dec 30. PMID: 33387729.

Abstract

Background: Rectus sheath block (RSB) has been increasingly used for pain management after laparoscopic procedures but with a conflicting data on its analgesic efficacy. We conducted a systematic review and meta-analysis to evaluate the efficacy and safety of RSB in adults undergoing laparoscopic surgery.

Methods: A systematic literature search of the PubMed, Embase, CINAHL, and Cochrane Library databases was conducted from inception through October 1, 2020, to identify trials comparing RSB with a control group in laparoscopic surgery. The primary outcome was rest pain scores at 0-2 h postoperatively. Secondary outcomes included pain scores at rest at 10-12 and 24 h postoperatively, pain scores on movement at 0-2, 10-12, and 24 h postoperatively, 24- and 48-h opioid consumption, opioid-related side effects, and RSB-associated adverse events.

Results: Nine trials with 698 patients were included. RSB was associated with significantly lower rest pain scores at 0-2 h postoperatively (standardized mean difference -1.83, 95% confidence interval [-2.70, -0.96], $P < 0.001$, $I2 = 95\%$) than control. Furthermore, RSB significantly reduced pain scores at rest at 10-12 h postoperatively and on movement at 0-2 h postoperatively, 24-h opioid consumption, and opioid-related side effects. Other secondary outcomes were similar between groups. Preoperative RSB provided better pain control compared with postoperative block administration. None of the studies reported local or systemic complications related to RSB.

Conclusions: In the setting of laparoscopic surgery, RSB improves pain control for up to 12 h postoperatively and reduces opioid consumption, without major reported adverse events.

18: Hamid HKS, Davis GN, Trejo-Avila M, Igwe PO, Garcia-Marín A. Prognostic and predictive value of neutrophil-to-lymphocyte ratio after curative rectal cancer resection: A systematic review and meta-analysis. Surg Oncol. 2021 Jun;37:101556. doi: 10.1016/j.suronc.2021.101556. Epub 2021 Mar 31. PMID: 33819850.

Abstract

Background: Neutrophil-to-lymphocyte ratio (NLR) has been shown to be associated with poor prognosis in numerous solid malignancies. Here, we quantify the prognostic value of NLR in rectal cancer patients undergoing curative-intent surgery, and compare it with platelet-to-lymphocyte ratio (PLR) and lymphocyte-to-monocyte ratio (LMR).

Methods: A comprehensive search of several electronic databases was performed through January 2021, to identify studies evaluating the prognostic impact of pretreatment NLR in patients undergoing curative rectal cancer resection. The endpoints were overall survival (OS), disease-free survival (DFS), and clinicopathologic parameters. The pooled hazard ratio (HR) or odds ratio with 95% confidence interval (CI) were calculated.

Results: Thirty-one studies comprising 7553 patients were assessed. All studies evaluated NLR; thirteen and six evaluated PLR and LMR, respectively. High NLR was associated with worse OS (HR 1.92, 95% CI 1.60-2.30, $P < 0.001$) and DFS (HR 1.83, 95% CI 1.51-2.22, $P < 0.001$), and the results were consistent in all subgroup analyses by treatment modality, tumor stage, study location, and NLR cut-off value, except for the subgroups limited to cohorts with cut-off value ≥ 4. The size of effect of NLR on OS and DFS was greater than that of PLR, and similar to that of LMR. Finally, high NLR was associated with lower rate of pathologic complete response.

Conclusions: In the setting of curative rectal cancer resection, pretreatment NLR correlates with tumor response to neoadjuvant therapy, and along with LMR, is a robust predictor of poorer prognosis. These biomarkers may thus help risk-stratify patients for individualized treatments and enhanced surveillance.

19: Hamid HKS, Emile SH, Davis GN. Prognostic Significance of Lymphocyte-to-Monocyte and Platelet-to-Lymphocyte Ratio in Rectal Cancer: A Systematic Review, Meta-analysis, and Meta-regression. Dis Colon Rectum. 2022 Feb 1;65(2):178-187. doi: 10.1097/DCR.0000000000002291. PMID: 34775400.

Abstract

Background: The low lymphocyte-to-monocyte ratio and high platelet-to-lymphocyte ratio have been reported to be poor prognostic indicators in various solid tumors, but the prognostic significance in rectal cancer remains controversial.

Objectives: We sought to determine the prognostic value of the lymphocyte-to-monocyte ratio and the platelet-to-lymphocyte ratio following curative-intent surgery for rectal cancer.

Data sources: Following PRISMA guidelines (PROSPERO, ID: CRD42020190880), PubMed and Embase databases were searched through January 2021 including 3 other registered medical databases.

Study selection: Studies evaluating the impact of pretreatment lymphocyte-to-monocyte ratio and platelet-to-lymphocyte ratio on overall or disease-free survival in patients undergoing curative rectal cancer resection were selected.

Main outcomes measures: The main outcome measures were overall and disease-free survival.

Results: A total of 23 studies (6683 patients) were included; lymphocyte-to-monocyte ratio and platelet-to-lymphocyte ratio were evaluated in 14 and 16 studies. A low lymphocyte-to-monocyte ratio was associated with poorer overall survival (HR, 1.57; 95% CI, 1.29-1.90; $p < 0.001$) and disease-free survival (HR, 1.29; 95% CI, 1.13-1.46; $p < 0.001$). However, when the analysis was limited to patients treated with surgery alone or to those with stage I to III tumors, lymphocyte-to-monocyte ratio was not a predictor of overall survival and disease-free survival. The platelet-to-lymphocyte ratio did not predict for overall or disease-free survival, regardless of the treatment modality, studied population, tumor stage, or cutoff value. Finally, a low lymphocyte-to-monocyte ratio, but not a high platelet-to-lymphocyte ratio, was inversely correlated with complete pathologic response rate.

Limitations: The retrospective nature of most included studies was a limitation.

Conclusions: Pretreatment lymphocyte-to-monocyte ratio, but not platelet-to-lymphocyte ratio, correlates with tumor response to neoadjuvant chemoradiotherapy and poorer prognosis after curative-intent surgery for rectal cancer, and it potentially represents a simple and reliable biomarker that could help optimize individualized clinical decision-making in high-risk patients.

20: Haynes BP, Schuster G, Buus R, Alataki A, Ginsburg O, Quang LH, Han PT, Khoa

PH, Van Dinh N, Van To T, Clemons M, Holcombe C, Osborne C, Evans A, Skene A, Sibbering M, Rogers C, Laws S, Noor L, Cheang MCU, Cleator SJ, Smith IE, Dowsett M. Impact of the menstrual cycle on commercial prognostic gene signatures in oestrogen receptor-positive primary breast cancer. Breast Cancer Res Treat. 2021 Nov;190(2):295-305. doi: 10.1007/s10549-021-06377-3. Epub 2021 Sep 15. PMID: 34524591; PMCID: PMC8558287.

Abstract

Purpose: Changes occur in the expression of oestrogen-regulated and proliferation-associated genes in oestrogen receptor (ER)-positive breast tumours during the menstrual cycle. We investigated if Oncotype® DX recurrence score (RS), Prosigna® (ROR) and EndoPredict® (EP/EPclin) prognostic tests, which include some of these genes, vary according to the time in the menstrual cycle when they are measured.

Methods: Pairs of test scores were derived from 30 ER-positive/human epidermal growth factor receptor-2-negative tumours sampled at two different points of the menstrual cycle. Menstrual cycle windows were prospectively defined as either W1 (days 1-6 and 27-35; low oestrogen and low progesterone) or W2 (days 7-26; high oestrogen and high or low progesterone).

Results: The invasion module score of RS was lower (- 10.9%; p = 0.098), whereas the ER (+ 16.6%; p = 0.046) and proliferation (+ 7.3%; p = 0.13) module scores were higher in W2. PGR expression was significantly increased in W2 (+ 81.4%; p = 0.0029). Despite this, mean scores were not significantly different between W1 and W2 for any of the tests and the two measurements showed high correlation (r = 0.72-0.93). However, variability between the two measurements led to tumours being assigned to different risk categories in the following proportion of cases: RS 22.7%, ROR 27.3%, EP 13.6% and EPclin 13.6%.

Conclusion: There are significant changes during the menstrual cycle in the expression of some of the genes and gene module scores comprising the RS, ROR and EP/EPclin scores. These did not affect any of the prognostic scores in a systematic fashion, but there was substantial variability in paired measurements.

21: Hermena S, Francis M. Clinical Presentation, Imaging Features, and Management of Müller-Weiss Disease. Cureus. 2021 Oct 11;13(10):e18659. doi: 10.7759/cureus.18659. PMID: 34786245; PMCID: PMC8579404.

Abstract

Müller-Weiss disease (MWD) is a rare condition of unclear pathogenesis that causes navicular bone collapse and fragmentation. MWD can be challenging to diagnose and presents with midfoot and hindfoot pain and deformities. Although its incidence is unknown, MWD more commonly affects women aged between 40 and 60 years. This study reviews and summarizes the published literature on MWD to allow a better understanding of the pathomechanics, presentation, imaging modalities, and treatment options for MWD.

22: Hooper DG, Roberts DN, Lorencatto DF, Pollard DA, Spivey DM, Storr DW, Webster DD, Eccles MA, Ramsay MG, Jansen DJ, Thomas DR, Bounds DH, Eddie DM, Knight DS, Pearson DR, Khun Ng DJC, Weldring MT, Courtiour MS, Smith ML, DeVeaux MN, Cherian DB, Flack T, Rogen S, Mekki N, Ward H, Edwards S, Booth N, Clarke H,

Rowe S, Adams K, Gotts D. Why do clinicians treat, or not treat, a patient for sepsis? Using the theoretical domains framework to elicit barriers and enablers to performing the Sepsis Six in UK hospitals. J Infect. 2021 Dec;83(6):709-737. doi: 10.1016/j.jinf.2021.08.036. Epub 2021 Aug 26. PMID: 34454956.

Abstract

Müller-Weiss disease (MWD) is a rare condition of unclear pathogenesis that causes navicular bone collapse and fragmentation. MWD can be challenging to diagnose and presents with midfoot and hindfoot pain and deformities. Although its incidence is unknown, MWD more commonly affects women aged between 40 and 60 years. This study reviews and summarizes the published literature on MWD to allow a better understanding of the pathomechanics, presentation, imaging modalities, and treatment options for MWD.

23: Huber PM, Afzal N, Arya M, Boxler S, Dudderidge T, Emberton M, Guillaumier S, Hindley RG, Hosking-Jervis F, Leemann L, Lewi H, McCartan N, Moore CM, Nigam R, Odgen C, Persad R, Virdi J, Winkler M, Ahmed HU. Focal HIFU therapy for anterior compared to posterior prostate cancer lesions. World J Urol. 2021 Apr;39(4):1115-1119. doi: 10.1007/s00345-020-03297-7. Epub 2020 Jul 7. PMID: 32638084; PMCID: PMC8124043.

Abstract

Objective: To compare cancer control in anterior compared to posterior prostate cancer lesions treated with a focal HIFU therapy approach.

Materials and methods: In a prospectively maintained national database, 598 patients underwent focal HIFU (Sonablate®500) (March/2007-November/2016). Follow-up occurred with 3-monthly clinic visits and PSA testing in the first year with PSA, every 6-12 months with mpMRI with biopsy for MRI-suspicion of recurrence. Treatment failure was any secondary treatment (ADT/chemotherapy, cryotherapy, EBRT, RRP, or re-HIFU), tumour recurrence with Gleason ≥ 3 + 4 on prostate biopsy without further treatment or metastases/prostate cancer-related mortality. Cases with anterior cancer were compared to those with posterior disease.

Results: 267 patients were analysed following eligibility criteria. 45 had an anterior focal-HIFU and 222 had a posterior focal-HIFU. Median age was 64 years and 66 years, respectively, with similar PSA level of 7.5 ng/ml and 6.92 ng/ml. 84% and 82%, respectively, had Gleason 3 + 4, 16% in both groups had Gleason 4 + 3, 0% and 2% had Gleason 4 + 4. Prostate volume was similar (33 ml vs. 36 ml, p = 0.315); median number of positive cores in biopsies was different in anterior and posterior tumours (7 vs. 5, p = 0.009), while medium cancer core length, and maximal cancer percentage of core were comparable. 17/45 (37.8%) anterior focal-HIFU patients compared to 45/222 (20.3%) posterior focal-HIFU patients required further treatment (p = 0.019).

Conclusion: Treating anterior prostate cancer lesions with focal HIFU may be less effective compared to posterior tumours.

24: Jaffer O, Gibbs P, Gibson M, Gilbert J, Hanko J, Jeevaratnam P, Jones R, Nicholas J, Ramnarine R, Sivaprakasam R, Steiner K, Tippett R, Wilkins J. A UK Expert Consensus Approach for Managing Symptomatic Arteriovenous Fistula (AVF) Stenosis in Haemodialysis Patients. Cardiovasc Intervent Radiol. 2021

Nov;44(11):1736-1746. doi: 10.1007/s00270-021-02875-5. Epub 2021 Jul 6. PMID: 34231014.

Abstract

Purpose: Stenoses in mature arteriovenous fistulas (AVFs) are common and can negatively impact on the quality of haemodialysis, the longevity of the AVF and lead to debilitating symptoms. Multiple treatment options exist; however, management can vary between different centres. We aimed to establish multidisciplinary consensus on the optimal stepwise application of interventions based on evidence and consensus.

Methods: A modified Delphi process was conducted with 13 participants from hospitals across the UK, all of whom have high-volume dialysis access practice.

Results: The usual intervention to rectify de novo stenoses of mature AVFs is fistuloplasty, although surgery for inflow segment stenoses is also clinically acceptable. Appropriate first-line interventions include plain old balloon angioplasty or high-pressure balloon angioplasty; if these fail during the fistuloplasty, consider upsizing the balloon, prolonged balloon inflation or using alternative interventions, such as cutting or scoring balloons and ultra-high-pressure balloons. Alternative or subsequent interventions vary by anatomical site and may require additional multidisciplinary team input. For a stenoses recurring between 3 and 12 months, it is appropriate to consider interventions used de novo, but with a lower threshold for using drug-coated balloons (DCBs) in all regions and for using stent grafts in all regions but inflow segment. Recurrence after 12 months should be treated as a de novo lesion, with DCBs considered if they have been used successfully during previous interventions.

Conclusions: These recommendations aim to provide a practical guide to multidisciplinary teams in order to optimise the use of multiple interventions for rectifying AVF stenoses and provide unified evidence-based practice guidelines.

25: James R, Griffin JGL, Senior C, Love R. The role of the Radiographer in osteoporosis and fracture prevention services - a narrative review. Radiography (Lond). 2021 Oct;27 Suppl 1:S34-S38. doi: 10.1016/j.radi.2021.07.020. Epub 2021 Aug 17. PMID: 34417105.

Abstract

Objective: To explore relevant literature and policy around the role of the radiographer working within osteoporosis services. Discussion will examine the value of radiographers in these services, as well as current limitations and future opportunities for advancing practice in these domains.

Key findings: Osteoporosis and fracture prevention are a public health issue that must be addressed to improve patient outcomes following fractures. DXA radiographers currently fulfill an important role in the diagnosis of osteoporosis and collaborative working between radiology and osteoporosis services is to be encouraged. Radiographers are able to extend their role into advanced practice within osteoporosis services such as fracture liaison and rheumatology, they have expert knowledge and experience to bring to these roles and post graduate education can further increase radiographer's expertise in this field. The inability of diagnostic radiographers to become independent prescribers is a current limitation for radiographers working within osteoporosis services.

Conclusion: The role of the radiographer working within DXA and osteoporosis services is evolving and is an exciting area of advanced practice. Promoting this specialty within radiography may help to improve job satisfaction as well as recruitment and retention rates. As radiographers scope of practice in osteoporosis changes and evolves, it is hoped that current legislation may change to allow independent prescribing for diagnostic radiographers, which can in turn streamline patient pathways and reduce the burden on primary and secondary care.

26: Jayatilaka MLT, As-Sultany M, Gabr A, Thornton L, Graham S, Mason L, Farrar NG; COVI-ORTH UK. Collaborative Overview of coronaVIrus impact on ORTHopaedic training in the UK (COVI - ORTH UK). Surgeon. 2021 Dec;19(6):e331-e337. doi: 10.1016/j.surge.2021.02.007. Epub 2021 Mar 10. PMID: 33762160; PMCID: PMC7945873.

Abstract

Introduction: COVID-19 was declared a pandemic by the World Health Organization on the 11th of March 2020 with the NHS deferring all non-urgent activity from the 15th of April 2020. The aim of our study was to assess the impact of COVID-19 on Trauma and Orthopaedic trainees nationally.

Methods: Trauma and Orthopaedic (T&O) specialty trainees nationally were asked to complete an electronic survey specifically on the impact of COVID-19 on their training. This UK based survey was conducted between May 2020 and July 2020.

Results: A total of 185 out of 975 (19%) T&O specialty trainees completed the survey. Redeployment was experienced by 25% of trainees. 84% of respondents had experienced a fall in total operating numbers in comparison with the same time period in 2019. 89% experienced a fall in elective operating and 63% experienced a fall in trauma operating. The pandemic has also had an effect on the delivery of teaching, with face to face teaching being replaced by webinar-based teaching. 63% of training programmes delivered regular weekly teaching, whilst 19% provided infrequent sessions and 11% provided no teaching.

Conclusion: This study has objectively demonstrated the significant impact of the COVID-19 pandemic on all aspects of T&O training.

27: Joffe JK, Cafferty FH, Murphy L, Rustin GJS, Sohaib SA, Gabe R, Stenning SP, James E, Noor D, Wade S, Schiavone F, Swift S, Dunwoodie E, Hall M, Sharma A, Braybrooke J, Shamash J, Logue J, Taylor HH, Hennig I, White J, Rudman S, Worlding J, Bloomfield D, Faust G, Glen H, Jones R, Seckl M, MacDonald G, Sreenivasan T, Kumar S, Protheroe A, Venkitaraman R, Mazhar D, Coyle V, Highley M, Geldart T, Laing R, Kaplan RS, Huddart RA; TRISST Trial Management Group and Investigators. Imaging Modality and Frequency in Surveillance of Stage I Seminoma Testicular Cancer: Results From a Randomized, Phase III, Noninferiority Trial (TRISST). J Clin Oncol. 2022 Mar 17:JCO2101199. doi: 10.1200/JCO.21.01199. Epub ahead of print. PMID: 35298280.

Abstract

Purpose: Survival in stage I seminoma is almost 100%. Computed tomography (CT) surveillance is an international standard of care, avoiding adjuvant therapy. In this young population, minimizing irradiation is vital. The Trial of Imaging and Surveillance in Seminoma Testis (TRISST) assessed whether magnetic resonance images (MRIs) or a reduced scan schedule could be used without an unacceptable increase in advanced relapses.

Methods: A phase III, noninferiority, factorial trial. Eligible participants had undergone orchiectomy for stage I seminoma with no adjuvant therapy planned. Random assignment was to seven CTs (6, 12, 18, 24, 36, 48, and 60 months); seven MRIs (same schedule); three CTs (6, 18, and 36 months); or three MRIs. The primary outcome was 6-year incidence of Royal Marsden Hospital stage ≥ IIC relapse (> 5 cm), aiming to exclude increases ≥ 5.7% (from 5.7% to 11.4%) with MRI (v CT) or three scans (v 7); target N = 660, all contributing to both comparisons. Secondary outcomes include relapse ≥ 3 cm, disease-free survival, and overall survival. Intention-to-treat and per-protocol analyses were performed.

Results: Six hundred sixty-nine patients enrolled (35 UK centers, 2008-2014); mean tumor size was 2.9 cm, and 358 (54%) were low risk (< 4 cm, no rete testis invasion). With a median follow-up of 72 months, 82 (12%) relapsed. Stage ≥ IIC relapse was rare (10 events). Although statistically noninferior, more events occurred with three scans (nine, 2.8%) versus seven scans (one, 0.3%): 2.5% absolute increase, 90% CI (1.0 to 4.1). Only 4/9 could have potentially been detected earlier with seven scans. Noninferiority of MRI versus CT was also shown; fewer events occurred with MRI (two [0.6%] v eight [2.6%]), 1.9% decrease (-3.5 to -0.3). Per-protocol analyses confirmed noninferiority. Five-year survival was 99%, with no tumor-related deaths.

Conclusion: Surveillance is a safe management approach-advanced relapse is rare, salvage treatment successful, and outcomes excellent, regardless of imaging frequency or modality. MRI can be recommended to reduce irradiation; and no adverse impact on long-term outcomes was seen with a reduced schedule.

28: Jopson JL, Ellis PE, Jerreat AS, Kneafsey LC, Moore MB, Day C, Scott JK, Griffiths H, Lee TV, Oliver GR, Fowler PV, Sherriff M, Ireland AJ. Patient reported experiences and treatment outcomes of orthodontic patients treated within secondary care settings in the South West of England during the COVID-19 pandemic. J Orthod. 2022 Mar;49(1):39-47. doi: 10.1177/14653125211029959. Epub 2021 Jul 9. PMID: 34240639.

Abstract

bjective: To assess the impact of the temporary cessation of orthodontic services on patients undergoing treatment during the COVID-19 pandemic.

Design: Two-phase multicentre service evaluation.

Setting: Secondary care orthodontic departments in the South West of England.

Materials and methods: Phase 1 - Patient-Reported Experience Measure questionnaire (PREM). The questionnaire was distributed to patients who had undergone orthodontic treatment during the COVID-19 pandemic once services had resumed. Phase 2 - assessment of treatment outcomes,

specifically with the Peer Assessment Rating (PAR) Index. A total of 280 PAR scores were obtained from a cohort of patients treated before and during the pandemic.

Results: A total of 711 PREM questionnaires were completed. Participants generally felt relaxed when visiting secondary care settings, orthodontic departments and whilst wearing orthodontic appliances during the pandemic. Nearly 40% of participants were concerned that the pandemic would impact on their treatment, particularly treatment length. Treatment outcomes revealed that patients treated before and during the pandemic experienced percentage PAR score reductions of 83.9% and 80.6%, respectively. Patients receiving treatment during the pandemic experienced longer treatment durations of 126 days.

Conclusion: During the pandemic, low levels of anxiety were reported with respect to receiving orthodontic treatment in secondary care settings. Irrespective of the pandemic, a high standard of orthodontic treatment was provided. However, patient concerns regarding treatment length were justified.

29: Kang M, Kohli S, Naumowicz Z, Barlow I. Stress fracture of the clavicle in a young adolescent male - A case report. Trauma Case Rep. 2021 Nov 23;36:100558. doi: 10.1016/j.tcr.2021.100558. PMID: 34901371; PMCID: PMC8640108.

No abstract available.

30: Kilic Y, Chauhan D, Avery P, Horwood N, Nakov R, Disney B, Segal JP. The public's attitude towards doctors' use of Twitter and perceived professionalism: an exploratory study. Clin Med (Lond). 2021 Sep;21(5):e475-e479. doi: 10.7861/clinmed.2021-0357. PMID: 34507932; PMCID: PMC8439510.

Abstract

Introduction: Medical professionals use social media to interact with other healthcare professionals, discuss medical issues and promote healthcare information. These platforms have tremendous power to promote healthcare messages but also have potential to damage the profession if used inappropriately. It is currently unknown how others perceive medical doctors' Twitter activity and, therefore, we conducted an online survey exploring these views.

Methods: We used a Google Forms questionnaire consisting of 21 questions, which we distributed on Twitter, exploring doctors', patients', the public's and other healthcare professionals' views of doctors' Twitter activities. We investigated factors that were associated with mistrust by univariate and multivariate analysis.

Results: Seven-hundred and twenty-six respondents completed the survey. By univariate analysis, a higher proportion of non-doctors reported witnessing unprofessional behaviour and potential breaches of patient confidentiality compared with doctors ($p<0.01$). In addition, a significantly higher proportion of non-doctors felt that doctors' Twitter accounts should be monitored by both their employer and regulator when compared with doctors. By multivariate analysis, the main predictor of mistrust in the profession were those that had previously witnessed unprofessional behaviour (odds ratio 2.70; 95% confidence interval 2.08-3.33; $p<0.01$).

Conclusion: There are discrepancies in how doctors and non-doctors view Twitter activity and significant mistrust in the profession was brought about by doctors' Twitter activity. To help limit

this, adherence to current guidelines set out by the General Medical Council and British Medical Association is vital and doctors should be cautious about how their Twitter activity is professionally perceived by others before posting.

31: Leone E, Eddison N, Healy A, Royse C, Chockalingam N. Exploration of implementation, financial and technical considerations within allied health professional (AHP) telehealth consultation guidance: a scoping review including UK AHP professional bodies' guidance. BMJ Open. 2021 Dec 27;11(12):e055823. doi: 10.1136/bmjopen-2021-055823. PMID: 34969656; PMCID: PMC8718347.

Abstract

Objectives The COVID-19 pandemic has resulted in a shift to remote consultations, but telehealth consultation guidelines are lacking or inconsistent. Therefore, a scoping review was performed to chart the information in the articles exploring telehealth for the UK allied health professionals (AHPs) and compare them with the UK AHP professional bodies' guidelines.

Design Scoping review following Aksey and O' Malley methodological framework.

Data sources CINHAL and MEDLINE were searched from inception to March 2021 using terms related to 'telehealth', 'guidelines' and 'AHPs'. Additionally, the UK AHP professional bodies were contacted requesting their guidelines.

Study selection Articles exploring telehealth for patient consultations, written in English and published in peer-reviewed journal or guidelines available from UK AHP professional bodies/their websites were considered eligible for review.

Data extraction One reviewer extracted data concerning three overarching domains: implementation, financial and technological considerations.

Results 2632 articles were identified through database searches with 21 articles eligible for review. Eight guidelines were obtained from the UK AHP professional bodies with a total of 29 included articles/guidelines. Most articles were published in the last two years; there was variety in telehealth terminology, and most were developed for occupational therapists, physiotherapists and speech and language therapists. Information was lacking about the assessment of telehealth use and effectiveness, barriers and limitations, the logistical management, the family's and caregiver's roles and the costs. There was lack of clarity on the AHPs' registration requirements, costs and coverage, and legal aspects.

Conclusion This study identified gaps in current guidelines, which showed similarities as well as discrepancies with the guidance for non-AHP healthcare professionals and revealed that the existing guidelines do not adequately support AHPs delivering telehealth consultations. Future research and collaborative work across AHP groups and the world's leading health institutions are suggested to establish common guidelines that will improve AHP telehealth services.

32: Ljungqvist O, de Boer HD, Balfour A, Fawcett WJ, Lobo DN, Nelson G, Scott MJ, Wainwright TW, Demartines N. Opportunities and Challenges for the Next Phase of Enhanced Recovery After Surgery: A Review. JAMA Surg. 2021 Aug

1;156(8):775-784. doi: 10.1001/jamasurg.2021.0586. Erratum in: JAMA Surg. 2021 Aug 1;156(8):800. PMID: 33881466.

Abstract

Importance: Enhanced Recovery After Surgery (ERAS) is a global surgical quality improvement initiative now firmly entrenched within the field of perioperative care. Although ERAS is associated with significant clinical outcome improvements and cost savings in numerous surgical specialties, several opportunities and challenges deserve further discussion.

Observations: Uptake and implementation of ERAS Society guidelines, together with ERAS-related research, have increased exponentially since the inception of the ERAS movement. Opportunities to further improve patient outcomes include addressing frailty, optimizing nutrition, prehabilitation, correcting preoperative anemia, and improving uptake of ERAS worldwide, including in low- and middle-income countries. Challenges facing enhanced recovery today include implementation, carbohydrate loading, reversal of neuromuscular blockade, and bowel preparation. The COVID-19 pandemic poses both a challenge and an opportunity for ERAS.

Conclusions and relevance: To date, ERAS has achieved significant benefit for patients and health systems; however, improvements are still needed, particularly in the areas of patient optimization and systematic implementation. During this time of global crisis, the ERAS method of delivering care is required to take surgery and anesthesia to the next level and bring improvements in outcomes to both patients and health systems.

33: Loganath K, Adamson PD, Moss AJ. Ticagrelor in the management of coronary artery disease. Future Cardiol. 2021 Jul;17(4):561-571. doi: 10.2217/fca-2020-0108. Epub 2020 Sep 22. PMID: 32960097.

Ticagrelor is a potent and orally active P2Y12 inhibitor. Ticagrelor has been extensively tested in Phase II and Phase III trials in patients with coronary artery disease. The pharmacokinetics and pharmacodynamics of ticagrelor result in more rapid and effective inhibition of platelet activation compared with other P2Y12 inhibitors. This has resulted in a reduction in recurrent major cardiovascular events in initial randomized controls trials comparing ticagrelor with clopidogrel. More recently, clinical trials have investigated the use of ticagrelor in patients with stable coronary artery disease and a high residual risk of coronary thrombotic events. In patients with stable coronary artery disease, the potent antiplatelet effect of ticagrelor is counterbalanced by an increased risk of major bleeding. Further research is ongoing to determine the optimal duration of ticagrelor therapy.

34: Mendes de Oliveira E, Keogh JM, Talbot F, Henning E, Ahmed R, Perdikari A, Bounds R, Wasiluk N, Ayinampudi V, Barroso I, Mokrosiński J, Jyothish D, Lim S, Gupta S, Kershaw M, Matei C, Partha P, Randell T, McAulay A, Wilson LC, Cheetham T, Crowne EC, Clayton P, Farooqi IS. Obesity-Associated GNAS Mutations and the Melanocortin Pathway. N Engl J Med. 2021 Oct 21;385(17):1581-1592. doi: 10.1056/NEJMoa2103329. Epub 2021 Oct 6. PMID: 34614324.

Abstract

Background: GNAS encodes the Gαs (stimulatory G-protein alpha subunit) protein, which mediates G protein-coupled receptor (GPCR) signaling. GNAS mutations cause developmental delay, short stature, and skeletal abnormalities in a syndrome called Albright's hereditary

osteodystrophy. Because of imprinting, mutations on the maternal allele also cause obesity and hormone resistance (pseudohypoparathyroidism).

Methods: We performed exome sequencing and targeted resequencing in 2548 children who presented with severe obesity, and we unexpectedly identified 22 GNAS mutation carriers. We investigated whether the effect of GNAS mutations on melanocortin 4 receptor (MC4R) signaling explains the obesity and whether the variable clinical spectrum in patients might be explained by the results of molecular assays.

Results: Almost all GNAS mutations impaired MC4R signaling. A total of 6 of 11 patients who were 12 to 18 years of age had reduced growth. In these patients, mutations disrupted growth hormone-releasing hormone receptor signaling, but growth was unaffected in carriers of mutations that did not affect this signaling pathway (mean standard-deviation score for height, -0.90 vs. 0.75, respectively; P = 0.02). Only 1 of 10 patients who reached final height before or during the study had short stature. GNAS mutations that impaired thyrotropin receptor signaling were associated with developmental delay and with higher thyrotropin levels (mean [±SD], 8.4±4.7 mIU per liter) than those in 340 severely obese children who did not have GNAS mutations (3.9±2.6 mIU per liter; P = 0.004).

Conclusions: Because pathogenic mutations may manifest with obesity alone, screening of children with severe obesity for GNAS deficiency may allow early diagnosis, improving clinical outcomes, and melanocortin agonists may aid in weight loss. GNAS mutations that are identified by means of unbiased genetic testing differentially affect GPCR signaling pathways that contribute to clinical heterogeneity. Monogenic diseases are clinically more variable than their classic descriptions suggest. (Funded by Wellcome and others.).

35: Naughton J, Booth K, Elliott P, Evans M, Simões M, Wilson S. Health literacy: The role of NHS library and knowledge services. Health Info Libr J. 2021 Jun;38(2):150-154. doi: 10.1111/hir.12371. Epub 2021 May 29. PMID: 34051119; PMCID: PMC8361722.

Abstract

Health literacy is key to person-centred, preventative healthcare and is both a societal and individual responsibility. This feature describes work undertaken by Health Education England, the Community Health and Learning Foundation and NHS Library and Knowledge Services to raise awareness among NHS staff and other key partners of the impact of low health literacy. It highlights a range of health literacy resources and ideas for developing and adapting these tools for remote delivery during and post-pandemic. D.I.

36: Northend M, Wilson W, Osborne W, Fox CP, Davies AJ, El-Sharkawi D, Phillips EH, Sim HW, Sadullah S, Shah N, Peng YY, Qureshi I, Addada J, Mora RF, Phillips N, Kuhnl A, Davies E, Wrench DJ, McKay P, Karpha I, Cowley A, Karim R, Challenor S, Singh V, Burton C, Auer R, Williams C, Cunningham J, Broom A, Arasaretnam A, Roddie C, Menne T, Townsend WM. Results of a UK real world study of polatuzumab vedotin, bendamustine, and rituximab for relapsed/refractory large B-cell lymphoma. Blood Adv. 2022 Jan 12:bloodadvances.2021005953. doi: 10.1182/bloodadvances.2021005953. Epub ahead of print. PMID: 35020818.

37: Palmer JS, Wilson C, Fraig H, Wilson D, Garrett S. Hearing Evaluation of ARthroplasty Surgeons: results from the HEARS study. Ann R Coll Surg Engl. 2021 Oct;103(9):673-677. doi: 10.1308/rcsann.2021.0050. Epub 2021 May 6. PMID: 33956515.

Abstract

Aims: The aim of this study was to investigate whether the prevalence of hearing loss among arthroplasty surgeons was comparable to clinicians from other medical specialties and to explore the factors associated with hearing loss.

Methods: A cross-sectional prevalence study was carried out. Arthroplasty surgeons and non-surgical clinicians were recruited from orthopaedic and medical conferences. All participants were given a paper questionnaire including demographic details, hearing history and the Tinnitus and Hearing Survey. All participants were screened for hearing loss in a quiet room using the HearCheck Screener™ (HCS; Siemens, Munich, Germany). Logistic regression was used to identify factors associated with hearing loss. All statistical models were adjusted for age, gender, smoking status and personal noise exposure.

Results: The HEARS (Hearing Evaluation of ARthroplasty Surgeons) study recruited 188 participants (106 arthroplasty surgeons; 82 non-surgical clinicians). Prevalence of hearing loss identified by the HCS was 31% for arthroplasty surgeons vs 11% for non-surgical clinicians. The odds of failing the HCS were 3.7 times higher in arthroplasty surgeons compared to their non-surgical colleagues ($p < 0.004$). The odds of self-reported hearing using the Tinnitus and Hearing Survey were 2.79 times higher among arthroplasty surgeons ($p < 0.003$).

Conclusion: The prevalence of hearing loss among arthroplasty surgeons is significantly higher than in their non-surgical colleagues. Noise generated during arthroplasty surgery should be recognised and managed to create safer working conditions.

38: Palmer JS, Fraig HH, Wilson CJ, Garrett SJW. Noise Evaluation of Arthroplasty Theaters: Results From the NEAT Study. J Arthroplasty. 2021 May;36(5):1819-1822. doi: 10.1016/j.arth.2020.11.026. Epub 2020 Nov 21. PMID: 33339636.

Abstract

Aims: The aim of this study was to define the levels of noise exposure for the surgeon, assistant, scrub nurse, and anesthetist during total hip and knee arthroplasty surgery. In addition, we sought to determine whether the noise exposure during these procedures reaches or exceeds the action values set out by the U.K. Noise at Work Regulations (2005).

Materials and methods: Individual noise exposure during arthroplasty hip and knee surgery was recorded using a personal noise Dosemeter System model 22 (DM22) (Pulsar instruments, Filey, U.K.). Recordings were taken in real-time during five separate theater sessions. Each theater session included two arthroplasty procedures and lasted approximately 4 hrs. Personal noise exposure was expressed in terms of peak sound pressure and an average noise exposure over an 8-hour time-period to reflect the noise experienced by the ear over a working day.

Results: In all three sessions involving total hip replacement surgery, the peak sound pressure, for the operating surgeon exceeded the exposure action values set out by the U.K. Noise at Work

Regulations. Theater sessions involving total knee replacement surgery did not exceed any exposure action values for LCPeak or LEPd.

Conclusion: Arthroplasty surgery is a working environment with significant noise exposure. We recommend any surgeon or theater member who is concerned about the noise generated in their theater to have noise levels formally assessed using appropriately positioned recording devices.

39: Ramjug S, Phillips G. Update in the diagnosis and management of acute pulmonary embolism for the non-respiratory physician. Clin Med (Lond). 2021 Nov;21(6):e591-e597. doi: 10.7861/clinmed.2021-0666. PMID: 34862218; PMCID: PMC8806288.

40: Ravi V, Murphy RJ, Moverley R, Derias M, Phadnis J. Outcome and complications following revision shoulder arthroplasty : a systematic review and meta-analysis. Bone Jt Open. 2021 Aug;2(8):618-630. doi: 10.1302/2633-1462.28.BJO-2021-0092.R1. PMID: 34382837; PMCID: PMC8384442.

Abstract

Aims: It is important to understand the rate of complications associated with the increasing burden of revision shoulder arthroplasty. Currently, this has not been well quantified. This review aims to address that deficiency with a focus on complication and reoperation rates, shoulder outcome scores, and comparison of anatomical and reverse prostheses when used in revision surgery.

Methods: A Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) systematic review was performed to identify clinical data for patients undergoing revision shoulder arthroplasty. Data were extracted from the literature and pooled for analysis. Complication and reoperation rates were analyzed using a meta-analysis of proportion, and continuous variables underwent comparative subgroup analysis.

Results: A total of 112 studies (5,379 shoulders) were eligible for inclusion, although complete clinical data was not ubiquitous. Indications for revision included component loosening 20% (601/3,041), instability 19% (577/3,041), rotator cuff failure 17% (528/3,041), and infection 16% (490/3,041). Intraoperative complication and postoperative complication and reoperation rates were 8% (230/2,915), 22% (825/3,843), and 13% (584/3,843) respectively. Intraoperative and postoperative complications included iatrogenic humeral fractures (91/230, 40%) and instability (215/825, 26%). Revision to reverse total shoulder arthroplasty (TSA), rather than revision to anatomical TSA from any index prosthesis, resulted in lower complication rates and superior Constant scores, although there was no difference in American Shoulder and Elbow Surgeons scores.

Conclusion: Satisfactory improvement in patient-reported outcome measures are reported following revision shoulder arthroplasty; however, revision surgery is associated with high complication rates and better outcomes may be evident following revision to reverse TSA. Cite this article: Bone Jt Open 2021;2(8):618-630.

41: Shah TT, Reddy D, Peters M, Ball D, Kim NH, Gomez EG, Miah S, Evans DE, Guillaumier S, van Rossum PSN, Van Son MJ, Hosking-Jervis F, Dudderidge T, Hindley R, Emara A, McCracken S, Greene D, Nigam R, McCartan N, Valerio M,

Minhas S, Afzal N, Lewi H, Ogden C, Persad R, Virdi J, Moore CM, Arya M, Emberton M, Ahmed HU, Winkler M. Focal therapy compared to radical prostatectomy for non-metastatic prostate cancer: a propensity score-matched study. Prostate Cancer Prostatic Dis. 2021 Jun;24(2):567-574. doi: 10.1038/s41391-020-00315-y. Epub 2021 Jan 28. PMID: 33504940.

Abstract

Introduction: Focal therapy (FT) ablates areas of prostate cancer rather than treating the whole gland. We compared oncological outcomes of FT to radical prostatectomy (RP).

Methods: Using prospective multicentre databases of 761 FT and 572 RP cases (November/2005-September/2018), patients with PSA < 20 ng/ml, Gleason </= 4 + 3 and stage </= T2c were 1-1 propensity score-matched for treatment year, age, PSA, Gleason, T-stage, cancer core length and use of neoadjuvant hormones. FT included 1-2 sessions. Primary outcome was failure-free survival (FFS) defined by need for salvage local or systemic therapy or metastases. Differences in FFS were determined using Kaplan-Meier analysis with log-rank test.

Results: 335 radical prostatectomy and 501 focal therapy patients were eligible for matching. For focal therapy, 420 had HIFU and 81 cryotherapy. Cryotherapy was used predominantly for anterior cancer. After matching, 246 RP and 246 FT cases were identified. For radical prostatectomy, mean (SD) age was 63.4 (5.6) years, median (IQR) PSA 7.9 g/ml (6-10) and median (IQR) follow-up 64 (30-89) months. For focal therapy, these were 63.3 (6.9) years, 7.9 ng/ml (5.5-10.6) and 49 [34-67] months, respectively. At 3, 5 and 8 years, FFS (95%CI) was 86% (81-91%), 82% (77-88%) and 79% (73-86%) for radical prostatectomy compared to 91% (87-95%), 86% (81-92%) and 83% (76-90%) following focal therapy (p = 0.12).

Conclusions: In patients with non-metastatic low- intermediate prostate cancer, oncological outcomes over 8 years were similar between focal therapy and radical prostatectomy.

42: Shergold S, Derias M, Moverley R, Murphy RJ, Guryel E, Phadnis J. Coronal shear fractures of the distal humerus managed according to the Modified Dubberley Classification System. J Shoulder Elbow Surg. 2022 Jan;31(1):133-142. doi: 10.1016/j.jse.2021.07.002. Epub 2021 Aug 11. PMID: 34390839.

Abstract

Background: Coronal shear fractures of the capitellum and trochlea are relatively uncommon and can be challenging to treat because of variable articular comminution and poor bone stock. Classification is valuable to help guide surgical decision making and prognosis. The aim of this study was to present a large series of coronal shear fractures treated according to the Modified Dubberley Classification System (MDCS).

Methods: Forty-five patients with a coronal shear fracture were followed up (12-93 months, mean: 28 months) after surgical intervention. Fractures were classified according to the MDCS by 3 observers, and outcome data collected included Oxford elbow score (OES), visual analog pain score (VAS), range of motion, complications, and radiographic findings.

Results: There were 10 type 1, 12 type 2, 8 type 3, and 15 type 4 fractures. There were 26 subtype B fractures (posterior comminution). A total of 37 patients underwent open reduction and internal fixation (ORIF) and 8 primary arthroplasty. The median OES and VAS were 43(16-48) and

2 (0-9), respectively. Median flexion extension arc was 125° (range, 70°-140°). There was no significant difference in OES, VAS, or range of motion according to fracture type (types 1-4), subtype (type a or b), or treatment method (arthroplasty vs. ORIF). The overall complication and reoperation rates were 31% and 33%, respectively. A total of 75% of complications occurred in type 3 and 4 fractures, and there was a nonsignificant trend toward higher complication rate in type B fractures than type A fractures (34% vs. 16%, P = .19). Patients with a type B fracture who underwent screw-only fixation had a significantly lower OES and higher complication rate compared with when they had combined plating with screws (OES, P = .03; complications P = .04) and compared with when an arthroplasty was performed (OES, P = .05; complications P = .04).

Conclusion: Consistently good outcomes can be achieved by classification and management according to the MDCS. It is recommended that type B fractures undergo combined plate and screw fixation and that type 4 fractures should be considered for arthroplasty because of the higher risk of complications with ORIF.

43: Smith F, Fowler P, Ellis P. Long-term treatment outcomes from a patient's perspective with Treacher Collins syndrome. BMJ Case Rep. 2021 May 27;14(5):e241351. doi: 10.1136/bcr-2020-241351. PMID: 34045198; PMCID: PMC8162097.

Abstract

The management of patients with Treacher Collins Syndrome (TCS) is complex and involves many different specialists within multidisciplinary teams (MDT). The treatment pathway extends from birth well into adulthood and is associated with a heavy burden of care. Due to the extensive nature of the interaction with these patients, MDT members have opportunities to provide enhanced patient-centred care and support.This case report provides an overview of the current knowledge of the aetiology of TCS, the management of these patients and provides a unique perspective from one of the coauthors who has TCS and reports on his treatment experiences and long-term treatment outcomes. By having a better understanding of the impact of TCS and treatment provided, MDT members can not only provide improved clinical treatment but also offer improved patient experiences for those with craniofacial anomalies in particular an increased awareness of the psychosocial challenges they endure.

44: Stride SL, Hundley VA, Way S, Sheppard ZA. Identifying the factors that influence midwives' perineal practice at the time of birth in the United Kingdom. Midwifery. 2021 Nov;102:103077. doi: 10.1016/j.midw.2021.103077. Epub 2021 Jun 25. PMID: 34252652.

Abstract

Objective: The Obstetric Anal Sphincter Injuries (OASI) Care Bundle is designed to reduce the incidence of obstetric anal sphincter injuries. However, introducing behavioural change requires an understanding of current practice. This study aims to establish midwives practise at the time of birth, and the factors that influence this.

Design: Quantitative research - a national online survey.

Setting: Nationwide - United Kingdom (UK). Participants 563 midwives from across the UK.

Methods: An online survey of midwives' practice. Midwives were invited to participate through the Supervisor of Midwives network. Consent was sought on the landing page. Data analysis using descriptive and inferential statistics, with sub group analyses were used to explore variations in practice. Measurements Number of midwives using "hands on" the perineum and the influences on midwives' perineal practice at the time of birth.

Findings: Most midwives preferred to use "hands on" the perineum at the time of birth (61.4%). "Hands on" practise was significantly associated with where midwives worked ($p<0.001$), risk factors for OASI ($p<0.001$), and the approach that they were taught in their midwifery training ($p<0.01$). Midwives expressed lack of confidence in some areas with a third unsure that they could identify the third degree tear category b (38.2%) or c (34.3%).

Key conclusions: There has been a growth in the number of midwives using "hands on" at the time of birth but midwives feel that they require additional training in regards to identifying an OASI. The study should be repeated following the roll out of the OASI care bundle, to identify its impact on midwives' perineal practice.

45: Tam MDBS, Dyer T, Dissez G, Morgan TN, Hughes M, Illes J, Rasalingham R, Rasalingham S. Augmenting lung cancer diagnosis on chest radiographs: positioning artificial intelligence to improve radiologist performance. Clin Radiol. 2021 Aug;76(8):607-614. doi: 10.1016/j.crad.2021.03.021. Epub 2021 May 11. PMID: 33993997.

Abstract

Aim: To evaluate the role that artificial intelligence (AI) could play in assisting radiologists as the first reader of chest radiographs (CXRs), to increase the accuracy and efficiency of lung cancer diagnosis by flagging positive cases before passing the remaining examinations to standard reporting.

Materials and methods: A dataset of 400 CXRs including 200 difficult lung cancer cases was curated. Examinations were reviewed by three FRCR radiologists and an AI algorithm to establish performance in tumour identification. AI and radiologist labels were combined retrospectively to simulate the proposed AI triage workflow.

Results: When used as a standalone algorithm, AI classification was equivalent to the average radiologist performance. The best overall performances were achieved when AI was combined with radiologists, with an average reduction of missed cancers of 60%. Combination with AI also standardised the performance of radiologists. The greatest improvements were observed when common sources of errors were present, such as distracting findings.

Discussion: The proposed AI implementation pathway stands to reduce radiologist errors and improve clinician reporting performance. Furthermore, taking a radiologist-centric approach in the development of clinical AI holds promise for catching systematically missed lung cancers. This represents a tremendous opportunity to improve patient outcomes for lung cancer diagnosis.

46: Taylor A, Sundar SS, Bowen R, Clayton R, Coleridge S, Fotopoulou C, Ghaem-Maghami S, Ledermann J, Manchanda R, Maxwell H, Michael A, Miles T, Nicum S, Nordin A, Ramsay B, Rundle S, Williams S, Wood NJ, Yiannakis D, Morrison J.

British Gynaecological Cancer Society recommendations for women with gynecological cancer who received non-standard care during the COVID-19 pandemic. Int J Gynecol Cancer. 2022 Jan;32(1):9-14. doi: 10.1136/ijgc-2021-002942. Epub 2021 Nov 18. PMID: 34795019.

Abstract

During the COVID-19 pandemic, pressures on clinical services required adaptation to how care was prioritised and delivered for women with gynecological cancer. This document discusses potential 'salvage' measures when treatment has deviated from the usual standard of care. The British Gynaecological Cancer Society convened a multidisciplinary working group to develop recommendations for the onward management and follow-up of women with gynecological cancer who have been impacted by a change in treatment during the pandemic. These recommendations are presented for each tumor type and for healthcare systems, and the impact on gynecological services are discussed. It will be important that patient concerns about the impact of COVID-19 on their cancer pathway are acknowledged and addressed for their ongoing care.

47: Vindrola-Padros C, Singh KE, Sidhu MS, Georghiou T, Sherlaw-Johnson C, Tomini SM, Inada-Kim M, Kirkham K, Streetly A, Cohen N, Fulop NJ. Remote home monitoring (virtual wards) for confirmed or suspected COVID-19 patients: a rapid systematic review. EClinicalMedicine. 2021 Jul;37:100965. doi: 10.1016/j.eclinm.2021.100965. Epub 2021 Jun 23. PMID: 34179736; PMCID: PMC8219406.

Background: the aim of this review was to analyze the implementation and impact of remote home monitoring models (virtual wards) for confirmed or suspected COVID-19 patients, identifying their main components, processes of implementation, target patient populations, impact on outcomes, costs and lessons learnt.

Methods: we carried out a rapid systematic review on models led by primary and secondary care across seven countries (US, Australia, Canada, The Netherlands, Ireland, China, UK). The main outcomes included in the review were: impact of remote home monitoring on virtual length of stay, escalation, emergency department attendance/reattendance, admission/readmission and mortality. The search was updated on February 2021. We used the PRISMA statement and the review was registered on PROSPERO (CRD: 42020202888).

Findings: the review included 27 articles. The aim of the models was to maintain patients safe in the appropriate setting. Most models were led by secondary care and confirmation of COVID-19 was not required (in most cases). Monitoring was carried via online platforms, paper-based systems with telephone calls or (less frequently) through wearable sensors. Models based on phone calls were considered more inclusive. Patient/career training was identified as a determining factor of success. We could not reach substantive conclusions regarding patient safety and the identification of early deterioration due to lack of standardized reporting and missing data. Economic analysis was not reported for most of the models and did not go beyond reporting resources used and the amount spent per patient monitored.

Interpretation: future research should focus on staff and patient experiences of care and inequalities in patients' access to care. Attention needs to be paid to the cost-effectiveness of the models and their sustainability, evaluation of their impact on patient outcomes by using comparators, and the use of risk-stratification tools.

48: Wade K, Robertson-Jones B, Hutchison A. Externalisation of a vein during venepuncture. BMJ Case Rep. 2022 Feb 28;15(2):e246286. doi: 10.1136/bcr-2021-246286. PMID: 35228222; PMCID: PMC8886376.
No abstract available

49: Warnholtz B, Schär M, Sackmann B, Lauxmann M, Chatzimichalis M, Prochazka L, Dobrev I, Huber AM, Sim JH. Contribution of the flexible incudo-malleal joint to middle-ear sound transmission under static pressure loads. Hear Res. 2021 Jul;406:108272. doi: 10.1016/j.heares.2021.108272. Epub 2021 May 11. PMID: 34038827.

Abstract

The incudo-malleal joint (IMJ) in the human middle ear is a true diarthrodial joint and it has been known that the flexibility of this joint does not contribute to better middle-ear sound transmission. Previous studies have proposed that a gliding motion between the malleus and the incus at this joint prevents the transmission of large displacements of the malleus to the incus and stapes and thus contributes to the protection of the inner ear as an immediate response against large static pressure changes. However, dynamic behavior of this joint under static pressure changes has not been fully revealed. In this study, effects of the flexibility of the IMJ on middle-ear sound transmission under static pressure difference between the middle-ear cavity and the environment were investigated. Experiments were performed in human cadaveric temporal bones with static pressures in the range of +/- 2 kPa being applied to the ear canal (relative to middle-ear cavity). Vibrational motions of the umbo and the stapes footplate center in response to acoustic stimulation (0.2-8 kHz) were measured using a 3D-Laser Doppler vibrometer for (1) the natural IMJ and (2) the IMJ with experimentally-reduced flexibility. With the natural condition of the IMJ, vibrations of the umbo and the stapes footplate center under static pressure loads were attenuated at low frequencies below the middle-ear resonance frequency as observed in previous studies. After the flexibility of the IMJ was reduced, additional attenuations of vibrational motion were observed for the umbo under positive static pressures in the ear canal (EC) and the stapes footplate center under both positive and negative static EC pressures. The additional attenuation of vibration reached 4~7 dB for the umbo under positive static EC pressures and the stapes footplate center under negative EC pressures, and 7~11 dB for the stapes footplate center under positive EC pressures. The results of this study indicate an adaptive mechanism of the flexible IMJ in the human middle ear to changes of static EC pressure by reducing the attenuation of the middle-ear sound transmission. Such results are expected to be used for diagnosis of the IMJ stiffening and to be applied to design of middle-ear prostheses.

50: Weiss W, Salomaa S, Giorgio MD, Boyd M, Thurston J, Takala J, Tokonami S, Vaillant L, Coates R, Kim JK. Key outcome summaries of the scientific programme of the IRPA15 congress. J Radiol Prot. 2021 Nov 10;41(4). doi: 10.1088/1361-6498/ac0802. PMID: 34082411.

Abstract

This special issue of JRP includes a selection of research papers and review articles presented at the 15th Congress of the International Radiation Protection Association (IRPA15) as chosen by the scientific committee. All invited journal contributions are suitably expanded beyond the initial conference presentations to meet the criteria for a full journal article and include (a) presentation within a comprehensive radiological protection context and (b) additional data/interpretation. Published contributions address a wide spectrum of scientific topics and concepts to further develop the radiation protection (RP) system. They are based on scientific evidence and available

experience in a wide spectrum of applications of the protection system. The IRPA is the international voice of the RP profession. It promotes excellence in RP by providing benchmarks of good practice, enhancing professional competence, and encourages the application of the highest standards of professional conduct, skills and knowledge for the benefit of individuals and society. Within the overarching theme of the conference 'Bridging RP Culture and Science-Widening Public Empathy' IRPA15 provided an invaluable opportunity to discuss and strengthen the relations between RP culture and science, and share developing scientific knowledge and related experience in RP among members of the scientific community, between representatives of key international organizations, including ICRP, IAEA, WHO, and NEA but also with the public. Some discussions focused on the rationale of available RP programmes and priorities, with an opportunity to identify and further develop key scientific issues of the current RP system as well as key processes for the interaction between members of the scientific community and society. The scientific programme of IRPA15 included eight topics and four thematic areas. The topical areas were: Underpinning Science; Dosimetry and Measurement; the System of Protection; Standards and Regulation; Practical Implementation-Medical Sector, as well as Industry and Research; Emergency Preparedness and Response; Existing Exposures and Non-ionizing Radiation. The thematic areas addressed were: Ethics; Communication and Public Understanding; RP Culture; Human Capital and Competency.

51: Yap ZJ, Sharif M, Bashir M. Is there an immunogenomic difference between thoracic and abdominal aortic aneurysms? J Card Surg. 2021 Apr;36(4):1520-1530. doi: 10.1111/jocs.15440. Epub 2021 Feb 18. PMID: 33604952.

Abstract

Background and aim: Aortic aneurysms most commonly occur in the infra-renal and proximal thoracic regions. While generally asymptomatic, progressive aneurysmal dilation can become rapidly lethal when dissection or ruptures occurs, highlighting the need for more robust screening. Abdominal aortic aneurysm (AAA) is more prevalent compared to thoracic aortic aneurysm (TAA). The true incidence of TAA is underreported due to the absence of population screening and the silent nature of TAA. To achieve the optimum survival rate in aortic aneurysms, knowledge of natural course, genetic association, and surgical results are needed to be applied with adequate medical treatment and careful selection of patients for operation. The purpose of this paper is to provide a comprehensive review of the literature on natural history, immunology, and genetic differences between thoracic and AAAs.

Method: The literature was collected from OVID, SCOPUS, and PubMed.

Results: (1) AAA expands faster than TAA. AAA expands at approximately 0.3-0.45 cm annually, depending on various factors (advancing age, diameter of aorta, smoking etc.). TAA expands up to 0.3 cm annually in a non-bicuspid aortic valve patient. (2) An increase in Matrix metallopeptidase 1, 2, 9, 12, 14 led to degrading extracellular matrix of the aortic vessel wall. This significantly contributed to the pathogenesis in AAA, whereas overactive Transforming growth factor-beta played a major role in the pathogenesis of TAA.

Conclusion: In the future, genetic testing may be the gold standard for tackling the geneticheterogeneity of aneurysms, therefore, identifying at-risk individuals developing TAA andAAA earlier.

52: Yioe V, Phillips G, Spencer LG. Interstitial lung disease on the acute take for the non-respiratory physician. Clin Med (Lond). 2021 Nov;21(6):e584-e590.

doi: 10.7861/clinmed.2021-0694. PMID: 34862217; PMCID: PMC8806283.

Abstract

Interstitial lung diseases (ILDs) are a heterogeneous group of diseases characterised by varying degrees of fibrotic and/or inflammatory abnormalities of the lung parenchyma. Management of ILD is often challenging for non-respiratory physicians. We discuss the respiratory assessment and management of patients with ILD presenting with acute breathlessness on the acute take, including acute exacerbations of ILD.