education

FROM THE JOURNALS Edited highlights of weekly research reviews

Terminating anti-D

Rhesus immunoglobulin (Rho(D), anti-D), has been a game changer for Rh negative pregnant women. Since it's been routinely given in the third trimester and at delivery, maternal sensitisation rates have fallen from 9-10% at each full term pregnancy to 0.2%. But should we also test and give anti-D after first trimester terminations of pregnancy?

In this prospective US study, 99.8% (505/506) of women who had a first trimester termination of pregnancy (medical or surgical) fell below the threshold for sensitisation in terms of the numbers of fetal red blood cells (fRBCs) in their blood after the procedure, and fRBC levels remained unchanged before and after termination. The threshold is a proxy for haemolytic disease of the newborn in subsequent pregnancies and seems robust.

JAMA doi:10.1001/jama.2023.16953

We're in this together

The increased risk of death by suicide among doctors globally is well documented, but less is known about the risks among other healthcare workers (HCWs), who share many of the same work conditions, pressures, and opportunities to self harm.

This pre-covid US cohort study found that registered nurses, health technicians, and healthcare support workers were at increased risk of dying by suicide compared with non-HCWs (adjusted hazard ratios 1.64, 1.39, and 1.81). In this study, suicide rates weren't increased for physicians or social workers (adjusted hazard ratios 1.11, 1.14) compared with non-HCWs. Some 95% of healthcare workers aren't doctors, and this finding has implications for all of us. Other studies have shown higher rates of mental health problems among HCWs, but the exact work related stressors aren't clear.

JAMA doi:10.1001/jama.2023.15787

Adolescents—catch them if you can

Sweden had compulsory military conscription for men aged 18 years until 2010, producing a 40 year trove of data in the form of the Swedish Military Conscription Register (SMCR). This cohort study used the SMCR from 1969 to 1997 to find out what happened to 1.36 million 18 year old conscripts with baseline raised blood pressure (elevated 120-129/<80 mm HG, hypertensive >130/80 mm Hg) over the next 36 years. Overall, 5.8% died or were admitted to hospital with a serious cardiovascular event by the age of 68 years. The cumulative risk for cardiovascular events increased gradually depending on what the blood pressure at age 18 had been (14.7%-24.3%).

This was an observational study of Swedish men who were fit enough for conscription, so it's hardly universally generalisable, and we have no evidence that intervention might have changed the outcome. But it suggests there may be utility in measuring blood pressure in 18 year olds.

Ann Intern Med doi:10.7326/M23-0112

Unequal restraint

Anyone who has spent time in an emergency department will have come across acutely agitated patients. Very occasionally, physical restraint using a mechanical device has to be used to keep staff and patients safe. It carries the risk of aspiration, choking, physical and psychological trauma, and lasting distrust of healthcare services. In the heat of the moment, protocols—if they exist—may not be followed, and unconscious or conscious bias may determine who gets restrained.

This US systematic review and meta-analysis including 2.5 million patient encounters and 24 000 episodes of restraint found that Black patients were significantly more likely to be restrained in emergency departments compared with white (risk ratio 1.31) and all non-Black patients (risk ratio 1.27). Hispanic patients were less likely to be restrained than non-Hispanic patients (risk ratio 0.85). Even allowing for confounders, it seems likely that individual, institutional, and systemic racism underlie this disturbing finding.

JAMA Intern Med doi:10.1001/jamainternmed.2023.4832

Wee tests

Screening for albuminuria (albumin:creatinine ratio (ACR) >3 mg/mmol) to detect early stage chronic kidney disease (CKD) is cost effective in populations at high risk of cardiovascular and renal disease. But is it viable to ask everyone to test their urine at home to pick up albuminuria?

This Dutch study showed that members of the general population were willing to get involved, with a participation rate of 59.4%. The researchers invited individuals with confirmed albuminuria to a screening centre to rigorously assess renal and cardiovascular risk factors. Those with newly diagnosed or poorly controlled risk factors were referred on to their GP, with 89.5% of those who attended the screening centre being referred to their GP for preventive treatment. Just over half went to their GP as instructed, and 66% received treatment as a result.

Lancet doi:10.1016/S0140-6736(23)00876-0

Ann Robinson, NHS GP and health writer and broadcaster

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PRACTICE POINTER

Diagnosis and management of sacrococcygeal pilonidal disease in primary care

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CPD READING
0.5 HOURS

A 25 year old man who works as a driver of heavy goods vehicles complains of pain and swelling in the natal cleft over the past few months. On examination, inflammation is evident in the sacrococcygeal region, with visible pits and discharging sinuses.

Sacrococcygeal pilonidal disease is an inflammatory condition of the skin and subcutaneous tissues of the natal cleft, often presenting as a spectrum ranging from asymptomatic pits to painful large abscesses. The term "pilonidal" is derived from the Latin "nest of hairs," referencing the accepted pathophysiology of loose hair burrowing into normal skin and causing a foreign body reaction. Sacrococcygeal pilonidal disease primarily affects young adults of working age. Patients usually have few comorbidities.

In this article, we outline approaches to the assessment of sacrococcygeal pilonidal disease, alleviation of symptoms, and guidance on referral.

How does it present?

Sacrococcygeal pilonidal disease can arise in one of three forms[1]:

- Acutely as an abscess (fig 1)
- Chronically as a sinus (an abnormal epithelialised connection with the skin surface) (fig 2)
- As complex disease characterised by chronic or recurrent abscesses with extensive, branching sinus tracts.

The affected area is above the anus and superficial to the coccyx under the skin of the sacrococcygeal region. Diagnosis is usually by clinical examination and further investigation is rarely warranted. On examination, a cyst or sinus is usually found 4-10 cm above the anus in the midline. Whether acute or chronic, the sinus is frequently accompanied by one or more pits in the midline that communicate with a deeper tract possibly containing hair debris.[2] In more chronic disease, secondary tracts can form and extend laterally or inferiorly around the anal canal.[3]

WHAT YOU NEED TO KNOW

- Refer urgently patients with an acute abscess for incision and drainage
- Refer patients with chronic symptomatic disease for specialist input, which could include non-surgical, minimally invasive, or surgical management
- Assess pain in symptomatic disease and offer analgesia as required

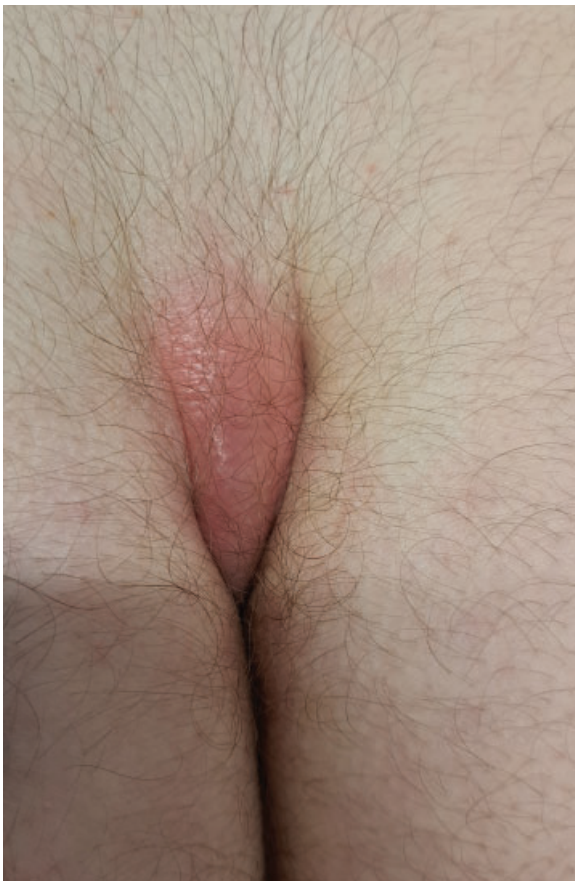

Fig 1 | Acute sacrococcygeal pilonidal abscess

Why does this happen?

Sacrococcygeal pilonidal disease is an acquired disease process: loose hairs are driven into the skin of the natal cleft by a rolling action of the buttocks. These loose hairs may be from the natal cleft itself, or remote areas including the back, neck, and head. The hairs are thought to cause a foreign body reaction and formation of a midline pit, which then fills with debris and results in a chronic process and formation of a sinus (with potential multiple openings). Further debris may cause a cavity or track and— owing to the moist conditions—an abscess cavity may form.[4,5]

The underlying cause of sacrococcygeal pilonidal disease is unclear: a familial link supports a genetic predisposition,[6] but the incidence of pilonidal disease occurring between the fingers of hairdressers, sheep shearers, and other professionals handling hair points to an environmental cause.[7]

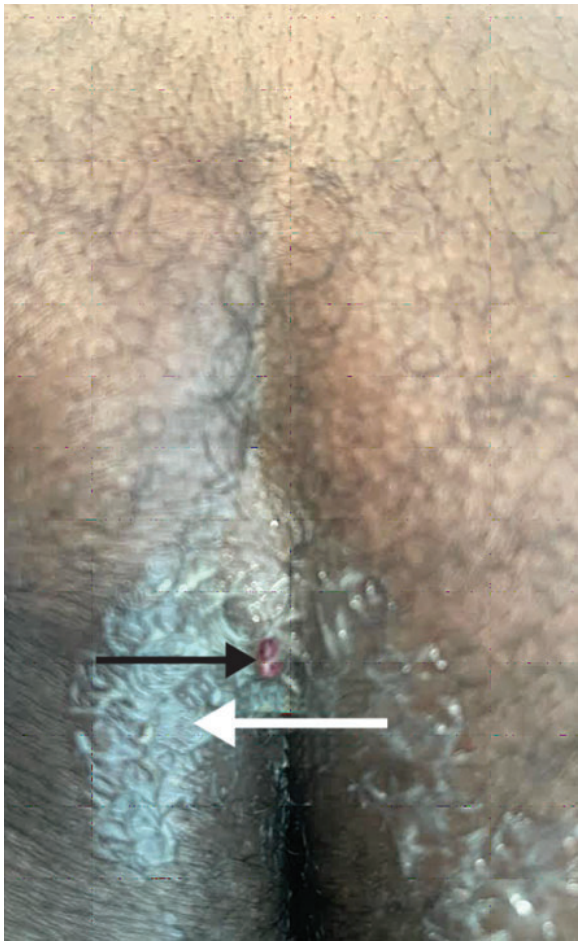

Fig 2 | Visible granuloma from sacrococcygeal pilonidal sinus disease (black arrow). Patient had a concurrent acute abscess (white arrow)

How common is it and who is affected?

Sacrococcygeal pilonidal disease is a common condition, frequently seen in primary care, emergency departments, and surgical outpatient clinics. Population based data are sparse, and incidence has been estimated at 26 per 100 000 based on a single centre Norwegian study from 1995.[3] A more recent retrospective study in Germany analysed regional rates of inpatient admission for sacrococcygeal pilonidal disease over a 13 year period and found that rates were increasing, with 56 per 100 000 men admitted and 18 per 100 000 women admitted in 2017.[8] The disease is around four times more common in men than in women and typically presents between ages 15 and 30.[9] Specific risk factors include hirsutism, coarse hair, poor hygiene, a deep natal cleft, white ethnicity, obesity, prolonged periods of sitting (>6 hours a day), family history, and repetitive trauma.[10] During the second world war, the disease was nicknamed "jeep seat," and soldiers today are still at an increased risk of sacrococcygeal pilonidal disease. In one cross sectional study of Turkish army medicals, 48 per 1000 soldiers were found to have symptomatic pilonidal sinus disease.[11]

How to diagnose it and when to refer for specialist assessment

Asymptomatic pits without inflammation can be managed conservatively. These are present in the midline of the natal cleft and are characterised by enlarged skin pores without signs of inflammation such as erythema, swelling, and discharge. Reassure the patient that the disease is unlikely to become symptomatic after their fourth decade, and advise them to be aware of signs of inflammation.[12] Discuss hygiene and other risk factors such as obesity, smoking, and long periods of sitting.

Neither routine follow-up nor surgical assessment is required for asymptomatic disease.

Acute sacrococcygeal pilonidal abscess presents as a fluctuant tender mass in the natal cleft or off the midline with or without associated cellulitis (fig 2). Whether primary or recurrent, arrange assessment with the local emergency surgery team for incision and drainage.

Symptomatic sacrococcygeal pilonidal sinus disease presents with one or more painful and/or infected sinuses in the natal cleft. This can be diagnosed on clinical examination by identifying one or more discharging sinuses. Erythema, swelling, and trapped hairs may also be identified. Sacrococcygeal pilonidal disease does not typically extend to the perianal region: if perianal disease is present, consider an alternative diagnosis such as Crohn's or perianal fistula.[13]

Refer patients with symptomatic or recurrent disease as an outpatient (non-urgent) to the local secondary service (likely general or colorectal surgery).

During the second world war, the disease was nicknamed "jeep seat," and soldiers today are still at an increased risk

Management of acute abscess

Conventional management for acute sacrococcygeal pilonidal abscess is primary incision and drainage (off the midline) with the cavity left to heal by secondary intention. This is a strong recommendation in guidelines from the American Society of Colon and Rectal Surgeons.[5] Around half of these patients have recurrence of disease and develop a chronic discharging sinus.[14,15] Antibiotics have no role in the treatment of an acute abscess,[5] but can have a role in management after drainage.[16] Smoking cessation should be encouraged to prevent recurrence. One German study of 610 patients showed that smokers developed recurrent sacrococcygeal pilonidal abscess significantly more frequently following surgical management than non-smokers during their disease.[17]

EDUCATION INTO PRACTICE

- What lifestyle or risk factor modifications might you discuss with patients with pilonidal disease?
- How might you support the wellbeing of a patient following surgical intervention for pilonidal disease?

PATIENT PERSPECTIVE

My pilonidal abscess first presented with non-stop agonising pain and fever that did not respond to antibiotics. The abscess was surgically drained and packed, but after a month of difficult recovery started spontaneously discharging again. Since then, the area is often sore, with episodes of acute needle-like pain. I had a recurrent abscess 18 months later, and again underwent incision and drainage. This time the wound was left open and I found it easier to recover. I often feel exhausted and my personal life is affected because I'm conscious of the pain, discomfort, and the reminder on my lower back.

RESOURCES FOR PATIENTS

EIDO healthcare patient information forms are available for patients undergoing surgery for pilonidal abscess drainage and pilonidal sinus disease (https://www.eidohealthcare.com/). Most UK hospitals have access to these.

Management of chronic disease

Chronic pilonidal sinus disease can become painful and debilitating. Assess pain and offer analgesia as required.

Two systematic reviews have analysed the effectiveness of laser hair removal for symptomatic sacrococcygeal pilonidal sinus disease, and both concluded that current evidence is promising but limited, and additional research is required to assess the effectiveness of laser hair removal.[18 19] Laser hair removal resulted in a lower recurrence rate of 9.3% compared with 19.7% of those who did not undergo hair removal and 23.4% recurrence rate in those shaving or using depilation creams.[19] However, authors of these reviews highlight the lack of large sample sizes and low quality of methodology in studies included in their systematic review.[19]

Surgical excision

Numerous formal excisional operations have been described for chronic sacrococcygeal pilonidal sinus disease. They all carry the risk of wound breakdown (up to 42%) and recurrent disease.[20] Recurrence is estimated in around 10% of patients at five years, 20% at 10 years, and 30% at 20 years postoperatively.[20] Discuss non-operative management, as postoperative complications may have a greater impact on the patient's quality of life than the disease itself. Wound complications may result in chronic pain, time off work, mental health deterioration, and a regret regarding surgery.[21 22]

Operations fall into two categories: excision of diseased tissue with healing by secondary intention, and excision of diseased tissue with primary closure which includes various flap techniques (see below). A Cochrane review in 2010 concluded that those undergoing primary repair benefit from faster healing times, but have a slightly higher recurrence rate. It also concluded that off midline repair was superior to midline repair in primary closure.[23] However, a 2018 meta-analysis that focused on long term follow-up (>5 years) found that those left to heal by secondary intention had much higher recurrence in the long term compared with those undergoing primary repair.[24] These conflicting studies highlight that no "gold standard" surgery is recommended for sacrococcygeal pilonidal sinus disease. The choice of surgical technique depends on the characteristics of the pilonidal sinus, the experience and expertise of the surgeon, and the patient's wishes.[25]

No "gold standard" surgery is recommended for sacrococcygeal pilonidal sinus disease

Flap techniques are intended to achieve off midline closure and flatten the gluteal cleft. Here we briefly describe three common methods. No single off midline technique has been shown to be superior to another.[26]

Karydakis

The Karydakis procedure involves an off-centre elliptical incision to excise the pilonidal sinus and affected tissue down to the midline sacral fascia. A covering flap consisting of skin, dermis, and underlying fat is then created by undercutting the medial edge, which upon closure lateralises the wound away from the midline.[27]

Bascom "cleft lift"

The Bascom procedure is similar to the Karydakis procedure, but has specific emphasis on tailoring the incision to the patient's specific skin contours and not excising unnecessary fat that lies deep to the disease.[28]

Limberg "rhomboid flap"

A rhomboid shaped incision is created to allow the flap of skin lateral to the incision to be raised and transposed medially to flatten out the natal cleft, producing a Z-shaped scar.[29]

Minimally invasive surgery

Minimally invasive surgery techniques involve performing curettage of the sinus and injecting substances including fibrin glue and phenol into the sinus, with the aim of obliterating the sinus tract space. A Cochrane review in 2017 found little evidence for fibrin glue.[30] A prospective randomised control trial of 140 patients in Turkey showed faster wound healing with phenol, taking 16.2 days compared with 40.1 days when the sinus was excised and laid open ($p<0.001$), with no significant difference in recurrence of disease.[31] Newer surgical treatments are also emerging, including sinus laser assisted closure,[32] and endoscopic pilonidal sinus treatment.[33]

Competing interests: None declared.

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Find the full version with references at doi: 10.1136/bmj-2022-071511

HOW THIS ARTICLE WAS MADE

We undertook a Medline search in PubMed, using the search terms "pilonidal disease" and "pilonidal sinus disease". We reviewed articles with the highest levels of evidence, such as systematic reviews and meta-analysis, including those from the Cochrane Collaboration database.

HOW PATIENTS WERE INVOLVED IN THE CREATION OF THIS ARTICLE

A person with experience of pilonidal disease reviewed the manuscript before submission and wrote a "patient perspective," which we included in the article. We thank them for their involvement and insight into how pilonidal disease has affected their life, including the psychosocial impact.

Taking a collateral history: the missing piece of the puzzle

CPD READING
0.5 HOURS

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When someone is unable to give a full, detailed, or accurate account of their medical, functional, or social situation, the relevant information may be gathered from others, such as family, friends, or carers. This is known as the collateral history.

In this overview, we highlight the benefits and challenges of collecting an effective collateral history and suggest ways to improve collateral history taking.

What is a collateral history?

Collateral histories are used to make diagnoses and formulate ongoing medical and social management plans (box 1). There are clinical conditions where collateral histories are commonly needed and often are the sole information source about the patient. These may include patients presenting with epilepsy, syncope, delirium, dementia,[1 2] psychiatric disorders,[3 4] and frailty. Collateral histories can also enhance or verify the narrative given by a patient and may be helpful, or pivotal, for any patient's care (box 2).

A collateral history can include information about the patient's physical and mental health, social circumstances, and functional status (see box 3). It may include information related to frailty such as, cognition, mobility, falls, continence, and self care. Collateral histories are used to gain information about how the patient was functioning before the assessment and to consider how they will manage and be supported in the future. In a patient with complex needs all these domains may need to be covered but clinicians can tailor the collateral histories to the individual patient.

WHAT YOU NEED TO KNOW

- A collateral history can include information about the patient's physical and mental health, social circumstances, and functional abilities before a medical assessment
- Good communication and clear ways of documenting and sharing information can avoid missing or duplicating information
- There may be contextual differences in patient behaviours and needs, and information may need to be collected from more than one source

DMITRIY SHIRONOSOV/ALAMY

Box 1 | What is a collateral history?

- A collateral history is information gathered from someone other than the patient
- They may come from family, friends, carers, or other health professionals
- Collateral histories collect information in various domains, including about the patient's physical and mental health, social circumstances, and functional abilities in the period leading up to a medical assessment
- Collateral histories build a picture of the patient's life and how the current physical and psychological problems are affecting the patient
- When taking a collateral history, all domains should be considered, regardless of the patient's medical condition or age (see box 3). Their relative importance will vary, however, and may not always be applicable

Box 2 | Collateral history in context

Conventional medical training portrays medicine as a science, promoting an evidence based approach to reach diagnoses and design management plans. Evidence based medicine, reliant on empirical observation of populations in trial settings, cannot always be applied in a mechanistic fashion. Human illness behaviour is often idiosyncratic and contextual; solely depending on evidence based medicine can undervalue the importance of a narrative history.[5] Combining an evidence based approach and a narrative approach using patient and collateral histories is, in our view, a more robust way to reach accurate diagnoses and formulate management plans.

Box 3 | Suggested domains of collateral history information

Social circumstances—Partner/family/living alone, financial issues

Environment—Accommodation type, stairs, access to bathing and toilet

Cognition—Mental health, learning difficulties, neurodiversity

Activities of daily living—Washing, dressing, toileting, cooking, shopping. Gait and balance

Support (informal and formal)—Legal aspects such as advance care planning and end of life care plans and whether there is a legal representative for the patient

Medications

Why take a collateral history?

"Are they always like this?" is an increasingly relevant question when assessing patients, particularly as it is common for adults admitted to hospital to be living with frailty.[6] Frailty increases the risk of functional and cognitive decline. For adults who lack capacity, family and carers can advocate for the patient informally or may have a formal legal role as a decision maker on behalf of the patient.

Collateral histories are used as part of the comprehensive geriatric assessment for patients living with frailty. It is a multidimensional, holistic patient assessment that considers health and function and helps formulate plans to address issues that are of concern to the individual.[7] A comprehensive geriatric assessment obtained soon after admission helps target rehabilitation and can reduce length of stay by allowing early planning for discharge.[8 9] A better planned discharge reduces the chances of readmission.[9] Similarly, sharing of this information with community teams can facilitate targeted support to reduce risks of hospital admission.

A collateral history is useful for detecting cognitive impairment. A study into its ability to screen for mild cognitive impairment in patients with diabetes found the collateral history to be a reliable and accurate screening test compared with neuropsychiatric tests.[10] An observational study of 220 adults in a single emergency department in the UK found that, of 66 patients who had a collateral history taken, the information gathered suggested a pattern of undiagnosed dementia in 26 (39.4%) and contributed to good or excellent care in 96%.[11] In intensive care, pre-admission functional status is a strong independent predictor of mortality and affects the reliability of the acute physiology and chronic health evaluation (APACHE) score.[12] Functional information about a critically ill patient almost always needs to come from someone who knows the patient well.

While collateral histories are generally seen to be helpful for patients with frailty or cognitive impairment, they are useful for taking a history from a wider range of patients (box 4). While a patient of any age admitted to hospital for acute illness may be able to communicate their social circumstances themselves, further information from a collateral history may help plan any support required to facilitate timely discharge.

Who can take a collateral history?

A collateral history may be taken by an individual health professional. For patients living with frailty or disabilities, the information may be taken by different members of the multidisciplinary team. Good communication and clear ways of documenting and sharing information can avoid missing or duplicating information.

TIPS ON HOW TO COMPLETE AND DOCUMENT A COLLATERAL HISTORY

- Ensure that staff record up to date contact information for relatives and carers
- Develop a designated area in your notes or IT systems for recording collateral information for patients with conditions such as frailty, disability, multiple comorbidities, or mental health issues
- Develop a template to record relevant aspects of individuals' collateral histories that can be completed iteratively with the facility to update this later in an admission[19]
- Collection of a full collateral history should cover a breadth of information across six domains (see box 3)
- Educate patients and carers of the need for collateral information[19]

Collateral histories are used as part of the comprehensive geriatric assessment for patients

Box 4 | : Examples of when a collateral history changes clinical management (drawn from the clinical experience of the authors)

An 86 year old woman with confusion undergoes multiple investigations for delirium over a 3 week period. No collateral history has been taken regarding her cognition. After a geriatrician speaks to her husband, it becomes clear that she has a diagnosis of dementia and that her admission was because he could no longer cope, not because she is acutely unwell.

A young woman presents with her husband, who is concerned that her behaviour has changed. Examination and investigations, including a CT head scan, are normal and staff report no evidence of confusion. Despite this, the husband insists she is "not right." In view of this, a lumbar puncture is performed, and cerebrospinal fluid analysis confirms herpes encephalitis.

A 21 year old man in the emergency department is incoherent and confused. Staff initially suspect he is drunk, but a collateral history from a friend reveals he sustained a head injury while playing football. CT scan shows a skull fracture and extradural haemorrhage.

A clinician is asked to assess an agitated, breathless young woman who clinically appears anxious. After a delay, a collateral history is taken from her husband, who describes her as normally calm. However, before further investigations, she dies of an undiagnosed pulmonary embolus.

A 78 year old man attends the emergency department with chest pain. He has a diagnosis of advanced dementia and is confused and unable to give a history. An electrocardiogram shows ST segment depression, and the plan is to admit him. A call to his daughter reveals that he has been investigated repeatedly for similar episodes, which have responded to medical management, and that previous admissions had increased his confusion. He is therefore discharged.

EDUCATION INTO PRACTICE

- Can you record collateral information so all staff can contribute and access this information?
- Have you any recent examples of patients whose management plan was influenced by a collateral history you took?
- How could you integrate collateral history taking routinely into your hospital or general practice?

Missing collateral histories?

There is a lack of literature specific to the use of collateral histories in practice. Publications do acknowledge the importance of information gathering from those close to the patient, and National Institute for Health and Care Excellence (NICE) guidelines recommend a collateral history for all those with suspected dementia.[1] A national audit of dementia care in the UK indicated a need to improve information sharing of patient needs between healthcare workers and carers. Retrospective single centre studies of older people with cognitive impairment admitted to secondary care in the UK have suggested collateral histories are not often taken.[13 14] One observational study of 100 patients aged 75 or older admitted to medical wards in the UK found that 43% of patients had cognitive impairment but only 44% of those had a collateral history recorded. Of those that did, the description of their pre-morbid cognition and function was often incomplete.[15]

Even when collateral histories are taken, lack of record keeping may contribute to the apparent failure to use them in practice. A recent qualitative study of barriers to discharge of frail older patients followed the journeys of 37 patients admitted to hospital in the UK.[16] Although most staff did ask carers about the patients' home circumstances, level of functioning, and care provision, this information was not formally recorded, inadequately recorded, or difficult to find. Even when the information was available, its value was not always recognised. When a collateral history was well recorded, readily available, and the information used by staff, this was appreciated by patients and carers and resulted in better and prompter discharge.[16]

HOW THIS ARTICLE WAS CREATED

We conducted an extensive literature search, which revealed limited research. We then conducted our own research looking at barriers to discharge, which showed collateral histories were often incomplete or absent. Our own clinical and patient experiences have also guided the content of this article.

In circumstances where there is a concern of abuse, the possibility of receiving inaccurate information and the future risk to the patient need to be considered

Challenges of getting a good collateral history

Lack of time and lack of access to a carer, friend, or relative are key barriers to gaining collateral histories in practice. Identifying and accessing appropriate informants may become a low priority for busy healthcare staff. If the patient is living alone and has limited social contacts, this may reduce the opportunity to obtain an accurate collateral history, whereas, for patients who live in close family units, there is a better chance of finding another source of reliable information.

Collateral histories can be subject to reporting biases because certain behaviours or issues are contextual and carers or family members may each interpret or understand issues differently. Additionally, collateral history providers may have different experiences with a patient—for example, a patient with dementia may exhibit different behaviours in familiar versus unfamiliar situations. If the person providing the collateral history interacts with the patient only infrequently, this can reduce the accuracy of the information provided. Remaining aware of the potential for both contextual differences and misinformation and collecting information from more than one person can be helpful strategies to minimise the risk of bias. In circumstances where there is a concern of abuse, the possibility of receiving inaccurate or misleading information and the future risk to the patient need to be considered.

Additionally, there can be issues when patients do not consent to communication with third parties.[17] Gathering information about a patient from a third party does not require consent, although this should be done only when the information is necessary for good clinical care. Conversely, sharing information requires consent in almost all circumstances. Again, caution must be applied if there are concerns about abuse, when communication with certain individuals may risk harm to the patient. If a patient lacks capacity or there is a risk of harm to the patient or others, sharing clinical information can be justified provided it remains in the patient's interest and there is no concern that the third party would use the information inappropriately. Legal and ethical issues should be balanced against the patient's best interests.[18] Collateral histories are often needed to plan long term care in patients with significant dementia who lack capacity.

Competing interests: See bmj.com.

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HOW PATIENTS WERE INVOLVED IN THE CREATION OF THIS ARTICLE

Sarah Biggs and Jean Palmer, public contributors with lived experience of discharge from hospital as a patient or carer, have been an integral part of our research team. They suggested content for the article, particularly with regard to patients lacking capacity, and read and approved it before final submission. Sarah Biggs is included as a co-author.

One-stage hip revisions are as good as two-stage surgery to replace infected artificial hips

The study

Clinical and cost effectiveness of single stage compared with two stage revision for hip prosthetic joint infection (INFORM)

Blom AW, Lenguerrand E, Strange S, et al

BMJ 2022;379:e071281

CPD READING

0.5 HOURS

NIHR | National Institute for Health and Care Research

NIHR Alerts are summaries of NIHR-funded research with novel findings and implications for practice. They are intended for health and care professionals, commissioners, researchers and members of the public.

To read the full NIHR Alert, go to: bitly.ws/VW5L

Why was this study needed?

In the UK in 2019, more than 100 000 people had a first hip replacement. Many hip replacements last for more than 25 years. However, of every 100 people who have a hip replacement, one or two develop an infection in the artificial joint within two years. Infection can cause severe pain or disability, and people sometimes need further surgery.

In revision surgery, infected tissue surrounding the joint is removed, and the artificial joint replaced. Typically, this is carried out in two stages: infected tissue and all joint replacement implants are removed in the first stage, and, after the infection is completely cleared, a new artificial joint is inserted in the second stage. But people may wait weeks and sometimes months for the second stage. While they wait, their mobility and quality of life can be poor. In one-stage surgery, infected tissue and implants are removed, and the new joint inserted, in a single procedure.

Previous studies have shown that rates of reinfection are similar after one- and two-stage hip revisions. However, few studies have explored people's experiences of surgery (their pain, mobility, and how quickly they return to everyday activities).

In this study, researchers assessed how well people recovered from one- and two-stage surgery to replace an artificial hip after infection. They also assessed value for money.

What did this study do?

The study was carried out at 12 bone and joint specialist centres in the UK, and three in Sweden. It included 140 people who required surgery to replace an artificial hip after infection. Sixty-five people were randomly assigned to one-stage surgery, and 75 to two-stage. Their average age was 71; one in three (36%) was a woman.

After surgery, participants completed questionnaires about their experiences.

MARK THOMAS

What did it find?

The study found that:

- Eighteen months after surgery, people's pain, stiffness, and function (ability to carry out everyday activities) were similar in the two groups.
- Three months after surgery, pain, stiffness and function were better after the one-stage procedure, but from six months on, outcomes were similar.
- Few people (8%) in the single-stage group had a complication during surgery (such as fractures) compared with 27% in the two-stage group.
- No difference was seen in infections after 18 months. The risk of being readmitted to hospital or needing further surgery was similar between the two groups.
- One-stage operations were cheaper and offered better value for money. The one-stage group spent less time in hospital, had fewer visits to emergency departments, home visits from community nurses, and nights in residential care homes. This group had more appointments with primary care nurses.

Why is this important?

The study showed that one-stage revisions relieve pain and improve stiffness and hip function as effectively as two-stage procedures. One-stage revisions resulted in fewer complications during surgery, patients recovered more quickly, and they were more cost effective.

People in the two-stage group required more support from district nurses and home care workers. The researchers say that people who had one-stage surgery were more able to self-care and to get out and about after surgery.

One-stage surgery is not always possible. Sometimes, during the procedure, it becomes clear that complex reconstruction is needed, which could require specialist or bespoke implants. The surgeon might decide to clear the infection in this first stage and return to carry out the reconstruction in a second stage, with the appropriate tools and implants.

What's next?

Surgeons could consider carrying out more one-stage hip revisions, the researchers say. They recommend the use of one-stage surgery whenever possible.

The study team is conducting an NIHR-funded study to explore how to integrate one-stage surgery into regular practice.

Competing interests:
The BMJ has judged that there are no disqualifying financial ties to commercial companies.

Further details of other interests, disclaimers, and permissions can be found on bmj.com

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CASE REVIEW **A serpiginous plaque on the flank**

Erythematous, urticated, vesiculobullous, serpiginous (wavy margin), and linear plaques on the patient's flank, as seen on first presentation

A man in his 40s presented with acute, severe, burning pain and a rash on his left flank. The rash had appeared minutes after he came into contact with a rock in shallow sea waters, where he had been hand fishing, and it had spread throughout the affected area within an hour. The man was not wearing any clothing on his upper body at the time, and no sea animals were in the area.

He reported no difficulty breathing, chest discomfort, widespread itching, or facial swelling. On examination, erythematous, urticated, vesiculobullous, and linear plaques with wavy margins (serpiginous) were visible on his left flank (figure). His blood pressure and oxygen saturation levels were within the normal range, and his pulse rate was 95 beats/min. The man had no significant medical history and was not taking medications for any pre-existing conditions.

1 **What are the differential diagnoses?**
2 **What is the most likely diagnosis?**
3 **How should you manage this condition?**

Submitted by Anastasios Apostolos and Stamatios Gregoriou

Patient consent obtained.

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answers

CASE REVIEW **A serpiginous plaque on the flank**

1 What are the differential diagnoses?

Differential diagnoses includes allergic contact dermatitis, contact urticaria, and coral dermatitis. Allergic contact dermatitis is a type IV hypersensitivity reaction which may present with vesicles, erythematous papules, or eczematous plaques. Contact urticaria is a wheal-and-flare reaction that appears after contact with substances such as natural rubber latex, food proteins, and metals. Corals have been reported as a cause of contact urticaria, but the reaction may be transient.

2 What is the most likely diagnosis?

Coral dermatitis.

Corals are marine invertebrates classified under the phylum Cnidaria. Certain species contain nematocysts, an organelle that releases toxins. Coral dermatitis usually manifests as acute vesiculobullous toxic dermatitis. The angulated linear plaques on the patient's flank suggest that this is probably associated with coral rather than other cnidarians, such as jellyfish, where the reaction tends to induce longer and more linear lesions. The reaction can be acute or delayed, with acute reactions occurring immediately, and delayed reactions appearing days or weeks after contact with the coral. The rapid onset of the reaction in our patient suggests a toxic rather than an allergic reaction to the coral dermatitis.

3 How should you manage this condition?

Management includes topical steroids, oral antihistamines, and painkillers prescribed for one to two weeks. For severe cases, consider systemic administration of steroids. Patients with coral dermatitis might have delayed healing over several weeks or even months, and post inflammatory hyperpigmentation could be evident for even longer.

PATIENT OUTCOME

The patient was treated with topical corticosteroids, oral antihistamine, and paracetamol for five days. After four months, the rash had resolved completely.

LEARNING POINTS

- Coral dermatitis is caused by coral species that produce nematocysts.
- The reaction usually manifests as acute vesiculobullous toxic dermatitis with linear plaques that have an angulated appearance.
- Management includes topical steroids, oral antihistamines, and painkillers.

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0.5 HOURS

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LEARNING MODULE

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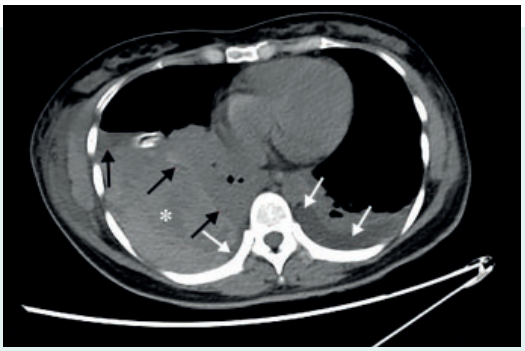
MINERVA

Breathlessness after a central line

A woman in her 30s developed acute respiratory distress and persistent hypotension in the minutes following surgery for ovarian cancer. A central line had been placed during the surgery. On auscultation of the chest, breath sounds were reduced on the right side. A chest radiograph showed a large opacity in the right lung field, with the trachea displaced to the left. Haemothorax was suspected and a chest drain inserted, but only a small amount of fluid was drained.

Subsequent computed tomography (CT) imaging (figure) showed an extrapleural haematoma in the right thorax, displacing the extrapleural fat with an associated pleural effusion. Extrapleural haematoma is caused by trauma to the chest wall and is a rare complication of central venous catheterisation. This patient's haematoma was most likely caused by a puncture of the subclavian vein during catheterisation.



CT image of the chest, showing haematoma (white asterisk), fat (black arrows), and plural effusion (white arrows)

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Patient consent obtained.

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Recreational drug use and acute cardiovascular events

More than 10% of people admitted to coronary care units had recently used recreational drugs—most commonly cannabis but also opioids, cocaine, amphetamines, and methylenedioxymethamphetamine—according to a survey from France that used urine testing to screen patients. Only half of patients declared their drug use. Risk of death, cardiac arrest, or haemodynamic shock was around 10 times higher in people testing positive than among those who hadn't used drugs (*Heart* doi:10.1136/heartjnl-2023-322520).

Plant based diets

Prospective studies have consistently shown that vegetarians have a lower all cause mortality and lower rates of ischaemic heart disease than people who regularly eat meat (*Am J Clin Nutr* doi:10.1093/ajcn/70.3.516s). Since plant based diets are rich in antioxidants and unsaturated fatty acids, one might also expect a favourable influence on brain ageing. However, a large population based longitudinal investigation from the Netherlands found no protective effect of plant based diets on the risk of dementia during 15 years of follow-up (*Age Ageing* doi:10.1093/ageing/afad178).

Concussion in children

Mild traumatic brain injury—concussion—is common in children. Fortunately, data from a prospective study of seven emergency departments in the US and Canada are reassuring about the long term consequences. Among 900 children aged 8 to 17 presenting with mild traumatic brain injury, there was no consistent evidence of differences in IQ scores either two weeks or three months after the injury when compared with a control group of children who had sustained a mild injury requiring orthopaedic care (*Pediatrics* doi:10.1542/peds.2022-060515).

Long term outcomes better for female surgeons

Six years ago, a paper in *The BMJ* reported that short term postoperative outcomes among 1 million patients who had undergone a wide range of surgical procedures were slightly better when the surgeon had been female than when they had been male. The measured outcomes included 30 day mortality, length of hospital stay, and complication and re-admission rates. Longer follow-up now finds that the differential in outcomes by the sex of the surgeon was maintained both 90 days and 12 months postoperatively (*JAMA Surg* doi:10.1001/jamasurg.2023.3744).

Outcomes of cholecystectomy by sex of surgeon

The comparison of surgical outcomes in the previous paragraph concerned patients in Ontario, Canada. In case anyone is tempted to raise doubts about whether the findings can be generalised, a similar comparison of more than 150 000 cholecystectomies in Sweden found that operations by female surgeons had fewer complications and fewer bile duct injuries than male surgeons, regardless of whether the procedure was carried out electively or as an emergency. Female surgeons tended to have longer operating times than their male colleagues (*JAMA Surg* doi:10.1001/jamasurg.2023.3736).

Exercise reduces complications in people with type 2 diabetes

Data from the UK Biobank suggest that, while increasing levels of physical activity don't protect against retinopathy, they do reduce the likelihood of neuropathy and nephropathy in people with type 2 diabetes. Even modest amounts of exercise were beneficial. A level of activity equivalent to walking for an hour and a half each week lowered risk by 20% to 30% (*Diabetes Care* doi:10.2337/dc23-0937).

Daily step counts

When encouraging patients to take more exercise, step counts have two substantial advantages. They're easy to understand and they're easy to monitor with a pedometer or smart device. A meta-analysis reckons that as few as 2600 steps per day yield useful benefits for both all cause mortality and cardiovascular events. More steps gave progressive risk reductions until an optimum of 8000 per day. Walking faster was better than walking slower (*J Am Coll Cardiol* doi:10.1016/j.jacc.2023.07.029).

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