Management of lateral hip pain

Similar principles can be applied from evidence at other anatomical sites

NORDICPHOTOS/ALAMY

RESEARCH, p 986

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Lateral hip pain has several different labels including trochanteric bursitis, gluteal tendinopathy, trochanteric tendinobursitis, and greater trochanter pain syndrome. Regardless of the name, patients with pain of the lateral hip present in various settings—primary care, sports medicine, orthopaedics, rheumatology, and spine and rehabilitation medicine. In the linked randomised controlled trial, Cohen and colleagues compared corticosteroid injections that were fluoroscopically guided with those that were anatomically guided in the treatment of greater trochanteric pain syndrome.[1]

The condition is common and often chronic,[2 3] and the diagnosis is overlooked in many cases. One in five patients referred to a tertiary care orthopaedic spine centre because of low back pain were diagnosed with greater trochanter pain syndrome, a diagnosis that had been missed by the referring general practitioners and specialty surgeons.[4]

The absence of a uniform terminology for this common condition reflects our ignorance of both the pathology and the source of pain. This applies not only to greater trochanter pain syndrome, but also to problems in other regions, such as the Achilles, rotator cuff, and other tendons and entheses.[5] The term "bursitis" implies inflammation in one or more of the peritrochanteric bursae. Yet histopathological examination of specimens from patients with clinical greater trochanter pain syndrome reveals no acute or chronic inflammatory cells.[6] Is the bursa an innocent bystander? Lying immediately beneath the clinically painful area are muscles, tendons, and entheses. Magnetic resonance imaging (MRI) studies confirmed tendinosis or even a complete or partial tear of the gluteus medius or minimus in most patients,[7 8] and this has led to yet another diagnostic term—rotator cuff tears of the hip. Unfortunately, MRI or ultrasound does not provide a diagnostic gold standard—although patients with clinical greater trochanter pain syndrome had abnormalities of the peritrochanteric tendon on MRI, so did nine of 10 asymptomatic controls.[9] Because abnormalities in the tendons or bursae are not necessarily diagnostic, imaging studies must be combined with clinical assessment.

Despite greater trochanter pain syndrome being a common and long term problem, the evidence base for treatment is small. Cohen and colleagues' trial comparing fluoroscopically guided to "blind" trochanteric bursa corticosteroid injections included 65 patients with a clinical diagnosis of greater trochanter pain syndrome.[1] The authors found no significant difference in the primary outcomes of pain scores at rest and activity at one month, but fluoroscopic injections cost more.

One interpretation of the study is to maintain the status quo—continue to use anatomical landmarks and palpation to guide injections. That conclusion presumes that corticosteroids are beneficial, however, but Cohen and colleagues also found that three months after the injection fewer than half of the patients in both groups had a positive outcome (>50% pain relief and satisfaction with the results).[1] So, are corticosteroid injections (even if ideally placed) an effective treatment for greater trochanter pain syndrome? This question cannot be answered by the present study because it did not include a control group that received placebo injections.

All previous studies evaluating corticosteroid injections at this site were unblinded and uncontrolled. At other sites, well designed studies have failed to show a long term benefit of corticosteroid injections over placebo.[10] Most Cochrane systematic reviews draw limited conclusions about the efficacy of corticosteroids in soft tissue injuries. We clearly need larger placebo controlled trials to examine the efficacy of these injections.

So if cortisone is not the magic bullet, what are the alternative treatment options? We suggest a five step management plan for the condition. Firstly, good clinical practice includes a thorough physical examination, where palpation and forced hip abduction should reproduce the symptoms. Remember that an L3-4 intervertebral disc or facet joint injury can refer pain to the lateral hip. Secondly, because the clinical relevance of abnormal MRI findings is unknown, a local anaesthetic injection is a straightforward and inexpensive diagnostic test. Thirdly, because it seems reasonable to view this syndrome as a gluteal tendinopathy, consider prescribing therapeutic exercise to promote tissue repair. Single leg knee bends and forward lunges both load the gluteal tendons on the same side. Systematic reviews have concluded that eccentric exercise—where the muscle lengthens while being loaded—is more effective than rest in ameliorating tendon pain at various anatomical sites,[11] but unfortunately no studies specifically relate to the gluteal region. Fourthly, the current study shows that a single corticosteroid injection provides a 50:50 chance of a positive outcome at three months.[1] Given the chronicity of this condition, patients may choose this option. The final resort is surgical intervention. Case series report that surgeons have identified gluteal tendon pathology and repaired it in refractory cases.

As is often the case, well designed studies provide as many questions as answers. Cohen and coworkers

challenge researchers to adopt an equally rigorous approach to testing other treatments that "show promise" for greater trochanter pain syndrome. In the meantime, management based on evidence from other anatomical sites (such as eccentric exercise at the Achilles tendon, patellar tendon, and adductor tendons) is consistent with Sackett's definition of evidence based medicine[12] and superior to therapeutic nihilism.

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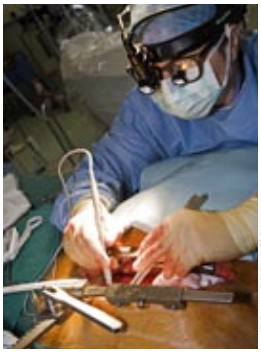
Social deprivation and poor prognosis after cardiac surgery

Targeting cardiac rehabilitation after surgery at deprived groups is key



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Observational studies have shown that health, quality of life, and outcomes of medical interventions are worse in patients from socially deprived areas.[1-3] These inequities seem to apply in private and nationalised healthcare systems for a range of surgical procedures.[4 5] The founding tenets of the NHS are fundamentally linked to redressing imbalances in health between people from different socioeconomic backgrounds. Our inability to achieve equity in health since the inception of the NHS more than 60 years ago weighs heavily on policy makers and the healthcare community.[6] The emergence of large disease registers and procedure registers is likely to continue to highlight these inequities.

The linked study by Pagano and colleagues identifies significant differences in mortality between different socioeconomic groups in 44 902 patients during the index admission and five years after a range of cardiac surgical procedures.[7] The authors used the census based Carstairs scores as a marker of social deprivation. This score is derived from levels of unemployment, car ownership, overcrowding, and low occupational social class in geographical postcode areas and is arguably as good as any other marker of social deprivation. In their patient group, Pagano and colleagues found a 2.4% increased risk of mortality for each point increment in Carstairs score over a median of five years' follow-up. These data suggest that a person at the 75th centile of Carstairs score is at 4.7 times greater risk of death compared with someone on the 25th centile. Even though the absolute mortality was low after surgery, around 3%, the difference in risk between affluent and deprived patients is striking. Why should the difference be so large? The median age of patients needing cardiac surgery in this study and more widely in the United Kingdom is about 65 years. By this time, each patient's postcode will be determined by several factors, including educational achievement, employment status, and economic security, all of which will have been influencing health status throughout life. Patients with social deprivation are therefore more likely to have severe disease and other comorbidities at the time of surgery.

But can this excess risk be modified in the periods before and after cardiac surgery? Pagano and colleagues identified three potentially modifiable cardiovascular risk factors associated with social deprivation—obesity, smoking, and diabetes. A recent study also showed the negative effects of these risk factors on long term mortality after cardiac surgery.[8] Pagano and colleagues found that after statistical adjustment for these risk factors the effect of deprivation on mortality was reduced by almost a third. This seems to be a good target for relative risk reduction, but clearly other factors—unmeasured and possibly immeasurable—contribute to the remaining excess mortality. Further studies are needed to examine these factors.

Smoking, diabetes, and obesity are all interventional targets in the period before and after cardiac surgery. These should be dealt with aggressively within established cardiac rehabilitation services. However, a recent audit of cardiac rehabilitation provision in the UK suggests that only 73% of patients receive cardiac rehabilitation after coronary artery bypass grafting.[9] Other studies have highlighted that poorer patients are less likely to attend cardiac rehabilitation because they think that it is unnecessary or because of the practical problems of attending.[10]

Despite these challenges, the fact that socially deprived people are more likely to be obese, smoke, and have diabetes highlights the need to target rehabilitation processes at these patients after cardiac surgery.

Using the postcode and the derived Carstairs score in the overall clinical assessment and associated management plan before and after surgery might be a useful way of doing this.

Intensive management of risk factors preoperatively by nurses has limited value in patients undergoing cardiac surgery.[11] Incentives could be offered to healthcare providers across organisational boundaries to intensively manage smoking cessation, control of diabetes, and obesity in more deprived patients. Indeed, existing governmental policies linked to financial incentives may achieve some benefits. Data are emerging that since the introduction of the quality and outcomes framework (QOF), a system where general practitioners receive financial benefits on achieving specific targets, use of statins in socially deprived areas has increased significantly.[12] Pagano and colleagues used data gathered between 1996 and 2007, so the effect of the QOF—introduced in 2004—may not yet be fully apparent. If the QOF does continue to narrow the health gap between rich and poor for coronary heart disease and other conditions, then it will have been worth the extra costs.

The overarching marker of social deprivation is poverty. Poverty is commonly understood to be a financial problem, but it can also cause social, familial, cultural, educational, environmental, emotional, and aspirational problems. Narrowing the gap between the health of the rich and the poor can be achieved only by dealing with the root causes early on in life and continuously throughout life. A good start in life—including decent education, adequate housing, and adequate employment opportunities—is most important. Health will follow.

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Inhaled corticosteroids after respiratory syncytial virus infection

Are ineffective and should not be used to prevent subsequent wheeze

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Respiratory syncytial virus (RSV) infection often causes bronchiolitis in infants, and the season for infection started early this year, perhaps because it has been a cold winter. Between 2% and 3% of infants are admitted to hospital with RSV each year. Supportive treatment with fluids, oxygen, and ventilation is still the only management option available because adrenaline, bronchodilators, steroids, ribavirin, and azithromycin offer no benefit or may even be harmful in the acute phase.[1-3] RSV bronchiolitis can lead to secondary wheeze, and treatment options are also limited in this phase of the disease. In the linked randomised controlled trial, Ermers and colleagues assess whether giving high dose hydrofluoroalkane extrafine beclometasone for three months after hospital admission for lower respiratory tract infection with RSV prevents recurrent wheeze.[4]

Reactive airways disease can occur after bronchiolitis, with a higher prevalence of recurrent wheeze in the shorter term and increased airway resistance up to a decade after initial RSV infection.[5 6] It has been suggested that if the immune mediated response to the initial acute infection could be modified, this would prevent or reduce the severity or duration of recurrent wheeze (or both).

Evidence is conflicting, however. Much research has focused on the potential benefit of steroids even though they do not usually modify chronic inflammatory disease in experimental systems or in patients. A systematic review examined the effect of inhaled glucocorticosteroids on recurrent wheeze after RSV infection but found only five studies that looked at 374 infants. The review concluded that inhaled corticosteroids given during the acute phase of bronchiolitis seemed to be safe but did not prevent post-bronchiolitic wheeze. However, the numbers were small and the data could not be pooled so strong recommendations could not be made.[7] After an initially promising pilot study of montelukast, a large randomised controlled trial recently found no benefit on post-bronchiolitis symptoms.[8]

Ermers and colleagues' study is the first large randomised double blind placebo controlled trial of its kind, and it attempts to answer the question posed

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Competing interests: RS and JN have received grants from government and charitable organisations for research into understanding the mechanism of term and preterm labour and investigating treatment. JN has acted as a consultant to a small drug company that was considering developing treatments for preterm labour.

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by the systematic review. The authors recruited 243 infants from 19 centres in the Netherlands, with follow-up for one year after completion of treatment. Selection criteria were appropriate, both cohorts were suitably balanced, and steroids were started within 24 hours of diagnosis. Young infants were appropriately targeted, setting this study apart from others that enrolled older cohorts. The study showed that starting high dose beclometasone early on in the disease course did not reduce the severity of recurrent wheeze. A small and temporary reduction in number of wheezing days was seen in the non-ventilated subgroup of the treatment arm. The authors concluded that this treatment should not be used to prevent wheeze after RSV infection.

So, yet another treatment has been shown not to work for RSV disease in infants—where next? Passive immunotherapy with palivizumab is effective in preventing RSV, but five injections are needed, and despite sales of >$1bn (£0.69bn; €0.76bn) in 2007, it is too expensive to be used except in high risk infants. It is under review again in the UK by the National Institutes for Health Research's Health Technology Assessment programme. Motavizumab is a new improved monoclonal antibody that has completed its phase III study, but it will have the same problems as palivizumab unless it is considerably cheaper. A new live attenuated intranasal RSV vaccine has also progressed to phase IIa trials in normal infants. Because the average age of admission with RSV bronchiolitis is under three months, its widespread uptake into the routine primary immunisation schedule will be a challenge. An oral small molecule RSV fusion inhibitor has entered phase I trials, but it has a long way to go.

The inflammatory effects of RSV may be more important than the direct effects of infection. New anti-inflammatory drugs rather than non-specific acute immunosuppressives, such as steroids, may be more useful in the clinic in the future. To date, translating immunobiological data from animal models of RSV infection has yielded relatively little, and future research should focus on human disease. For now, the only options are supportive care for infants with acute RSV and symptomatic treatment for subsequent wheeze.

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Increasing access to medicines

Antimicrobials should be a special case because of the risk of antimicrobial resistance

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Antimicrobials provide huge benefits to individuals and society, but they are unlike other drugs in that they target microorganisms and not pathology related to the host. Microorganisms develop resistance to these drugs, and this can affect agents in the same class and other classes. This phenomenon is a serious threat to public health, and it necessitates wide ranging counter initiatives. These have included efforts to reduce the use of antimicrobials in both animals and humans and to improve prescribing practices.[1]

Recent amendments to pharmaceutical policies in the United Kingdom have included giving patients greater access to medicines. Although this has many positive benefits, the policy has sparked debate,[2] particularly because three initiatives may inadvertently be countering efforts to control antimicrobial resistance, unless further safeguards are introduced. The first initiative is to increase the range (and therefore number) of trained prescribers to include nurses, pharmacists, podiatrists, and optometrists; the second is to allow patients who meet specific criteria to be given prescription only medicines by a healthcare professional who is not trained to prescribe; and the third initiative, which is of particular concern, is to make prescription only medicines available over the counter if this is considered safe.

The over the counter initiative is proving attractive; 69 products have been reclassified from prescription only medicines to pharmacy only (P) medicines by the Medicines and Healthcare Products Regulatory Agency. There have been four recent applications to reclassify antimicrobials; chloramphenicol eye ointment and azithromycin tablets have already been deregulated; and a decision about trimethoprim and nitrofurantoin tablets is pending.

Examination of the responses to consultation shows that the debate continues.[3] Many people

Competing interests: RF is the chair of the Department of Health Advisory Committee on Antimicrobial Resistance and Healthcare Associated Infection (ARHAI). SG was previously the pharmacist lead for the predecessor of ARHAI (the Department of Health Specialist Advisory Committee on Antimicrobial Resistance). SG is the associate director for research and development at NICE and a member of the permanent independent panel appointed by the secretary of state for health to perform the function of the "person appointed" in the Medicines for Human Use (marketing authorisations, etc) Regulations 1994, as amended. The views expressed here do not represent the views of the Department of Health, NICE, or the persons appointed panel.

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think that increased access to antimicrobials will benefit patients and the pharmacy profession and reduce the number of consultations with general practitioners. Others, including the Advisory Committee on Antibiotic Resistance and the British Society for Antimicrobial Chemotherapy, are concerned about the effect on resistance and the lack of a strategic framework for assessing applications relating to antimicrobials.[4]

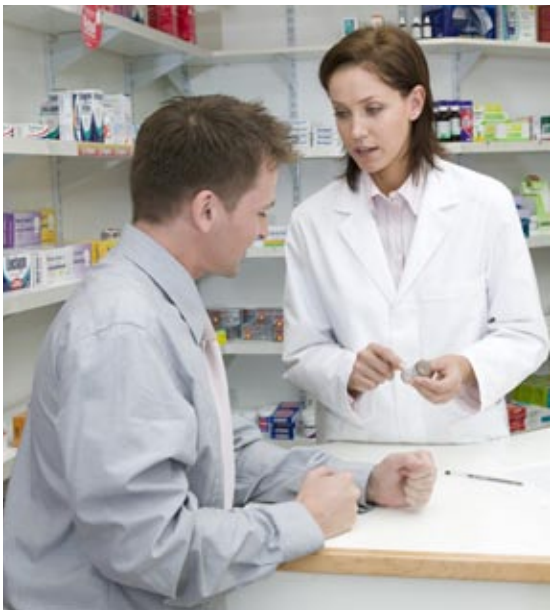
Although the guidance on relicensing acknowledges the indirect danger to human health posed by antimicrobial resistance, each application is considered independently. No overarching mechanism exists to take account of the potential overall effect on resistance. If one agent in a class is reclassified it is likely to set a precedent for related agents within the same class and those from different classes with similar indications. This has been seen with the recent applications for urinary tract infection.

Unlike other drugs, resistance continuously compromises the efficacy of antimicrobials after they have been licensed. Even though the licensed indications may no longer be appropriate, there is rarely any discussion of the need to change the marketing authorisation. Companies requesting reclassification must provide postmarketing safety data, but new efficacy data are not needed if the application is for the existing licensed indication. Furthermore, drugs tend to be reclassified at the later stages of their life cycle when they are generic; for antimicrobials this means that ample time will have elapsed for resistance to have developed. For example, 25% of *Escherichia coli* are now resistant to trimethoprim,[5] which would probably preclude marketing authorisation if the drug were considered today.

Although a risk management strategy has been implemented for azithromycin in the treatment of chlamydia, diagnostic confirmation is not a prerequisite for reclassification applications. Even with this strategy in place, the sexual contact does not need to be tested before treatment, susceptibility testing is not required, and the purchase is not routinely included in the patient's medical record. There is no independent data collection system to monitor overall usage and selective pressure on bacteria, let alone the appropriateness of sale.

The effect on current efforts to improve surveillance in primary care could be catastrophic. Furthermore, there has been no central effort to monitor the effect of reclassifications, including changes in prescribing patterns. The failure of current arrangements to effectively monitor appropriate prescribing and resistance problems is well appreciated. The fact that the proposals for reclassification are no worse than the current system is not a suitable defence for a new initiative; new initiatives should provide an opportunity to redress the balance.

International concerns exist regarding antibiotic resistance. Both the World Health Organization[6] and the European Council[7 8] have adopted policies to maintain antimicrobials as prescription only



medicines in the face of hard evidence on continued misuse. Although it can be argued that these recommendations do not take into account the availability of a P licensing category, as in the UK, many of the safeguards would still in effect be removed. One such safeguard is direct to consumer advertising, which increases demand[9] and contravenes current European Union policy relating to antimicrobials (although this may be irrelevant if the current EU proposals to allow prescription medicines to be advertised go ahead).[7 10] Recent changes in pharmaceutical policy threaten strategies to control antibiotic resistance. There is a clear case for antibiotics to remain prescription only medicines, or at the very minimum for safeguards to be strengthened should further reclassification be implemented.

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HIV testing in primary care

UK pilots will assess provider initiated "opt-out" testing strategies

ALIX/PHANIE/REX FEATURES

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The case for early diagnosis of HIV is compelling. Early treatment of HIV (when CD4+ cells are still >200/µl) has several benefits, both for the individual and for public health—it reduces associated morbidity and mortality and greatly reduces the potential for onward HIV transmission.[1] Self awareness of HIV seropositivity can be a powerful prevention tool at an individual and community level. Evidence suggests that some people with HIV behave in a less risky manner shortly after they learn they are HIV positive.[2] Early diagnosis and treatment is also cost effective, with direct care costs for late presenters (CD4+ cells <200/µl) estimated to be 200% higher than for early presenters.[3]

Despite medical advances in diagnosing and treating HIV, many people still present late with HIV infection.[4] In 2005, about 20 000 residents of the United Kingdom were unaware that they were infected with HIV; almost half of them were men who have sex with men and around a quarter were black Africans.[5] Late presenters are more likely to be older (>30), from black ethnic groups, and to be men who have sex with men.[6] Evidence is also increasing that symptoms of primary HIV infection are often missed by the infected person and healthcare workers alike.[7]

Recent policy discourse has centred on reframing the way we think about HIV testing. A good approach to prevention unites medical, behavioural, and structural strategies for optimum effectiveness.[8] Because encouraging people to test for HIV has limited success and HIV infection is overlooked in primary care, provider initiated "opt-out" HIV testing provides a promising solution.

New guidance published in the UK last year by the British HIV Association, the British Association of Sexual Health and HIV, and the British Infection Society advocates a move towards opt-out HIV testing in a variety of new settings,[9] including termination of pregnancy services and substance misuse services. Perhaps more radically, the guidance recommends that, in areas where the prevalence of HIV is more than two in 1000, HIV tests should be offered routinely to all men and women (15-59 years old) who register in primary care and are admitted to hospital.

At the same time as the launch of the new HIV testing guidance, the Department of Health invited proposals for pilots to support their implementation as well as work to test out new approaches to HIV testing in community based settings. Evaluations and outcomes from this new work will help inform future policy and practice. In total, eight projects were successful, including pilots of HIV testing in general practice and hospital departments in London, Brighton, and Leicester, and three pilots that involve working in the community with groups at increased risk of HIV.

The prevalence of HIV in the Brighton and Hove primary care trust is the highest outside London, it is the seventh highest in England, and it is four times above the guidance threshold for initiating opt-out HIV testing. During 2007, 1311 local residents accessed NHS funded HIV treatment services—a 17% increase from the previous year.[10] Most of the cases of HIV were acquired through sex between men.

The Brighton pilots aim to implement the new testing guidance to examine its feasibility, acceptability, cost effectiveness, and efficacy in reducing undiagnosed HIV. The primary care trust will pilot opt-out testing in primary care settings—all new patients between the age of 15 and 59 will be offered the test when they register. The acute trust will focus on acute medical admissions, and both pilots will be coordinated by a joint advisory group.

The implementation of these pilots poses several challenges, with ethical considerations centred on how to obtain informed consent in an opt-out model and some concerns about unnecessary testing. Many practical challenges must also be overcome, particularly in primary care, where blood is not routinely taken during patient registration and time constraints limit the length of consultations. Unease and a palpable lack of confidence from some healthcare professionals about raising the matter of HIV testing and delivering positive results presents another challenge.

This underscores the need for the pilots to work hand in hand with healthcare workers, patients, and service users to develop protocols that build workers' confidence in raising the subject of testing and obtaining informed consent as an important first step. In the face of ongoing and increasing HIV transmission, the pilots will provide insight into the potential of opt-out testing strategies to reduce undiagnosed HIV infection in practice. The pilots will also provide healthcare professionals in other parts of the UK with a practical protocol for introducing opt-out testing.

The pilots will also support the implementation of new preventive technologies in the future. The successful introduction of these technologies—such as pre-exposure prophylaxis, microbicides containing antiretroviral drugs, and preventive vaccines—will depend on the availability and acceptability of HIV testing.

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