ENDGAMES

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STATISTICAL QUESTION

What is an "n-of-1" trial?

Researchers assessed the effectiveness of "n-of-1" trials for the short term choice of drugs for osteoarthritis. The efficacy of sustained release paracetamol was compared with celecoxib in the management of symptoms associated with osteoarthritis. A series of double blind randomised n-of-1 controlled trials using a double dummy design was performed. The intervention was sustained release paracetamol (two 665 mg tablets, three times a day), or celecoxib (200 mg daily, or 200 mg twice a day for those who were already using this dose). Each treatment regimen was taken for two weeks, administered for three treatment cycles. The primary outcome measures included pain, stiffness, and functional limitation scores; preferred treatment; and adverse effects.

Participants were eligible if they had osteoarthritis in multiple sites, with pain for at least one month. In addition, their pain was severe enough to warrant consideration of the long term use of celecoxib, but the efficacy of this drug was in doubt. In total, 59 patients were recruited, with 41 completing an n-of-1 trial. It was reported that 33 of the 41 patients could not identify a difference between sustained release paracetamol and celecoxib in terms of overall symptom relief. Of the eight patients who were able to identify differences, seven reported better relief with celecoxib and one with sustained release paracetamol. It was concluded that n-of-1 trials may provide a rational and effective method to help choose the most effective drug for patients with osteoarthritis.

Which of the following statements, if any, are true?

a) Patients received both paracetamol and celecoxib

b All patients received a placebo

c) Each patient acted as his or her own control

d) The patient was the unit of randomisation

Submitted by Philip Sedgwick

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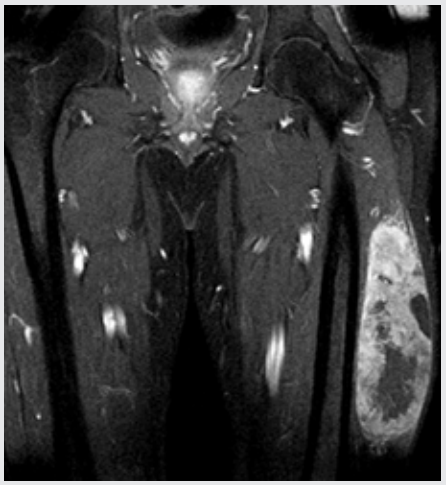
PICTURE QUIZ

A man with a mass in the thigh

A 54 year old man presented to his general practitioner because of a fullness in his left lateral thigh that he first noticed while playing golf, although it was not related to an identifiable injury. He had a history of hypertension and fibromyalgia and was taking atenolol, ramipril, pregabalin, and tramadol but was otherwise well. The GP thought that the swelling was caused by a muscular injury, but the patient re-presented four months later because the mass had grown from a small bump to a swelling of 8 cm in diameter. It was also beginning to cause some knee stiffness but no pain. On examination he had a large firm swelling in his lateral thigh. On this occasion his GP referred him on a two week wait to the regional plastic surgery department. An ultrasound scan showed a 6 × 8 cm intramuscular mass with cystic changes and patchy neovascularity, but no inguinal or pelvic lymphadenopathy. Ultrasonography was followed by magnetic resonance imaging, with and without gadolinium contrast (figure).



Magnetic resonance imaging scan with gadolinium contrast

1 What is the differential diagnosis?
2 What features make this mass suspicious?
3 What is the most appropriate action to take next?
4 What are the options for managing this patient?

Submitted by Richard Bodington and Paul R W Stanley

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ANATOMY QUIZ

Sites of tendon insertion on a shoulder radiograph

Name the tendons that insert or originate at the sites labelled A, B, C, D, E, and F.

Submitted by Jawad Naqvi and Sundip Dhanvant Udani

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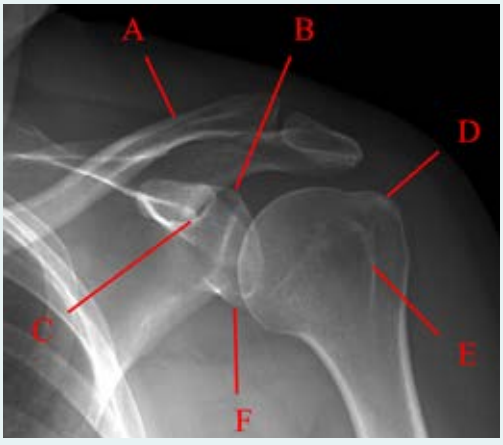

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