

## Trochanteric bursitis—a frequent cause of ‘hip’ pain in rheumatoid arthritis

D. RAMAN AND IAN HASLOCK

*From the Department of Rheumatology, South Tees Health District, Middlesbrough General Hospital, Ayresome Green Lane, Middlesbrough, Cleveland TS5 5AZ*

**SUMMARY** One hundred consecutive patients with rheumatoid arthritis (RA) were examined for the presence of trochanteric bursitis. This condition was found in 15. Ten patients responded to a single local injection of corticosteroid and the remaining 5 to a second injection. Trochanteric bursitis is an underdiagnosed, easily remediable cause of pain in RA. Specific examination for its presence should be a routine in all patients with RA, especially those with hip pain.

Pain related to the hip is a frequent finding in rheumatoid arthritis (RA). Bursal inflammation is also well recognised, but involvement of the trochanteric bursae in RA receives scant mention in standard texts.<sup>1</sup> Our interest in this subject was aroused when 3 consecutive patients with RA complaining of ‘hip’ pain proved on clinical examination to have pain arising from the trochanteric bursae. Local steroid injection into the bursae relieved the hip pain in each case. We therefore resolved to ascertain the overall incidence of this condition in a series of patients with RA.

### Patients and methods

One hundred consecutive patients with classical or definite RA by the American Rheumatism Association criteria<sup>2</sup> who were attending the Rheumatology Department at Middlesbrough were included in the study. Each was assessed with particular reference to pelvic girdle pain. The area over the trochanteric bursa on each side was localised and examined by the method of Little.<sup>3</sup> With the patient in the lateral recumbent position and the painful side uppermost, the lateral aspect of the thigh is palpated, starting well below the greater trochanter. As the examiner’s hand moves proximally the femur is at first indistinctly palpable through the vastus lateralis; the firm, bony inferior edge of the greater trochanter is then encountered. This bony edge and the area immediately above it are covered by the trochanteric bursa. The area can be localised with one finger tip, and firm pressure causes pain if the bursa is inflamed. Other possible causes of pain in the region of the hip were

evaluated clinically and, where indicated, radiologically.

Patients in whom a clinical diagnosis of trochanteric bursitis was made were given a local injection of 10 mg triamcinolone hexacetonide mixed with 2% lignocaine to a volume of 10 ml at the point of maximum tenderness, which in all cases coincided exactly with the anatomical localisation of the trochanteric bursa as described above. The results of injection were assessed at 4 and 8 weeks. When the symptoms had not resolved by 8 weeks a second similar injection was given, with 4- and 8-week assessments thereafter.

### Results

Of the 100 patients examined 33 were male and 67 were female. Fifteen patients, one male and 14 female, were diagnosed clinically as having trochanteric bursitis. The difference between the sexes is significant ( $\chi^2 = 4.22$ ,  $p < 0.05$ ). All had complained of hip pain of varying severity for periods of one to 5 years. X-rays of the lumbar spine and pelvis were taken in each case and none showed significant abnormality. Two of the patients showed abnormalities of gait, requiring the use of a walking stick, because of knee disease.

All 15 patients were injected with local corticosteroid at the point of maximum tenderness, and 10 were pain-free by the time of their 8-week follow-up. The 5 patients who required a second injection were all asymptomatic 8 weeks after this procedure.

### Discussion

Trochanteric bursitis is a frequently overlooked

cause of pelvic girdle pain. Anatomically there are 2 major and one minor bursae associated with the greater trochanter of the femur.<sup>4</sup> The gluteus minimus bursa is the minor bursa and the subgluteus medius bursa is the less important major bursa. The subgluteus maximus bursa is the most important and lies deep to the converging fibres of the tensor fasciae latae and the gluteus maximus muscle and fascia as they join to form the iliotibial tract. These powerful converging fibres are thus separated from the greater trochanter and origin of the vastus lateralis muscle by the bursa.

Early literature on the subject dealt mainly with bursitis with associated calcification.<sup>5-9</sup> Strenstrom and Gripenburg<sup>10</sup> reported an acute case in a child of 4 months with calcification and perforation into the hip joint. Spear and Lipscomb<sup>11</sup> in a study of 64 cases drew attention to subacute and chronic forms of trochanteric bursitis. Anderson<sup>12</sup> reported 45 cases and attempted some diagnostic criteria. He suggested that the condition, far from being rare, has a wide distribution among both sexes over the age of 30. Swezey<sup>13</sup> studied 70 patients from a geriatric home and concluded that subacute trochanteric bursitis is a common disorder found frequently in association with altered hip joint mechanics and low back pain.

Our own study was confined entirely to patients suffering from rheumatoid arthritis, 15% of whom had clinical evidence of involvement of the trochanteric bursae. All patients referred to their pain as 'hip pain', and some showed clinical signs, such as pain on abduction or rotation of the hip, which could lead the examiner to conclude that the hip was in fact the site of the patient's symptoms. Limitation of hip movement was found in 20% of one series in which the patients were from all age groups<sup>12</sup> and 100% of those in a series of geriatric patients.<sup>13</sup> This obviously remains a considerable source of diagnostic confusion unless careful local palpation is also undertaken. In our series women were affected more frequently than men. It is possible that the wider female pelvis affects the local mechanics in such a way that bursitis is more likely to be produced, but the inter-relationship of pelvic size, gait, and bursitis will require further studies to elucidate it fully.

Two-thirds of the patients obtained pain relief from a single local corticosteroid injection, all the rest responding to a second injection. These results are

very similar to those obtained by others,<sup>3, 12</sup> though third or fourth injections may be needed in some patients.

Our study illustrates the importance of careful clinical examination of patients with RA. We are certain that we have misdiagnosed a significant number of patients, including the 15 reported here, as having hip pain when in fact the trochanteric bursae were the sites of inflammation leading to the patients' symptoms. This is not simply of academic interest, as the pain is readily relieved by simple local injection. We consider therefore that specific local examination of the trochanteric bursae should be part of the routine examination of all patients with RA, especially those with hip pain, as in absence of such examination an easily remediable cause of pain will be overlooked in a significant number of patients.

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