

Clinical rheumatology training of Australian medical students

A national survey of 1991 graduates

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Objective: To describe Australian medical graduates' knowledge, experiences and practical training in rheumatology and their attitudes towards rehabilitation and disability.

Design: Cross-sectional survey of all interns at randomly selected hospitals in each State.

Participants: 382 Australian interns at 12 hospitals surveyed in the first week of their 1991 internship.

Results: New interns demonstrated little experience with soft tissue rheumatism, with only 45% reporting they had examined a patient with bursitis and 22% one with epicondylitis. There was considerable dissatisfaction with the teaching of assessment of low back pain, regardless of the amount of formal rheumatology teaching the graduates had experienced, with only 22% rating it as good or excellent. There was little evidence that students are exposed to the social dimensions of chronic illness; only 32% of students reported that they had been shown how to assess a patient's psychological adjustment to illness. Only 22% felt competent at assessing disability and handicap and less than half of the graduates studied had ever attended a clinic where there was a physiotherapist. Graduates who

had never been attached to either a rheumatology ward or an outpatients clinic (17%) were less likely to have examined a patient with gout ($P < 0.001$), osteoarthritis ($P < 0.01$), or chronic low back pain ($P < 0.05$), and were more likely to report dissatisfaction with training in rheumatology.

Conclusion: This survey suggests that there are significant problems in the training of medical students in musculoskeletal disorders, particularly in relation to the assessment of disability and the appreciation of psychosocial factors.

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Musculoskeletal conditions occupy a large part of most doctors' workloads. In the 1989-1990 Australian Health Survey musculoskeletal complaints were the second most common reason for consulting a doctor in the two weeks prior to interview.¹ With an increasing ageing population, doctors will need skills in the management of these conditions,^{2,3} including the psychological aspects, patient education and rehabilitation.^{4,5} Studies of undergraduate and postgraduate rheumatology training have identified psychological aspects of chronic illness and the role of other health professionals (e.g., physiotherapists) as

being poorly taught.^{6,7}

This study aimed to document the rheumatology teaching experienced by Australian medical graduates commencing their internship in January 1991. It identifies skill and knowledge deficits to provide a basis for future curriculum planning.

Methods

Study population and data collection

Within each State, a random selection was made of hospitals expecting more than 20 interns. Four hospitals were selected from New South Wales, two from each of Victoria, Queensland and South Australia and one from each of Western Australia and Tasmania. The selection probability for each hospital was proportional to the expected number of interns: All interns at these hospitals were approached in the first week of their 1991 internship.

The survey instrument

A self-administered questionnaire, partly derived from scales in similar studies,^{7,8} assessed knowledge, clinical approach, experience with musculoskeletal conditions and rated teaching received.

Percentages quoted in the text are weighted to take account of the cluster sampling design. Because the sampling design affects the precision of these estimates (design effect = 4.2), 95% confidence intervals were calculated by a jack-knife procedure.¹⁰

Results

The survey was completed by 382 interns from 12 hospitals. Five overseas graduates were

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excluded. The overall response rate was 92%.

The response rate at each hospital was over 90%, except in Western Australia (57%). The change to a six-year course meant that few graduates were from the University of Sydney. Because only two hospitals from Victoria were surveyed, graduates from Victoria are under-represented.

Description of the sample

The respondents' average age was 24 (range, 21–52 years) and 59% were male graduates. Only 22% nominated general practice as their career goal but 24% were uncertain.

Knowledge

The knowledge questions were well answered with 51.4% scoring 100%, but responses on prognosis of rheumatoid arthritis were inappropriately optimistic. For example, most graduates (84%) incorrectly responded that a normal life span is the general rule in rheumatoid arthritis and remission a possibility in many cases.

Clinical experience

While most graduates had examined patients with rheumatoid arthritis, gout and osteoarthritis during their training, they had had less experience with soft tissue conditions. Less than half reported personally examining patients with bursitis (45%), epicondylitis (23%) and polymyalgia rheumatica (29%); in fact many had never seen or examined patients with these conditions (25%, 53%, 43% respectively).

The teaching they had received appeared to have focused on the technical aspects of the management of musculoskeletal disorders. Sixty-one per cent had been present at a hip replacement operation, but few had attended a clinic where there was a physiotherapist or occupational therapist (43% and 36% respectively). Only 32% recalled being shown how to assess patients' psychological adjustment to their illness but about half had been shown how to aspirate a joint (52%). However, experience in practical procedures was low: only 19% had aspirated a joint and 14% had injected a joint.

Most graduates included the musculoskeletal system in their routine case histories and admission procedure arbitrarily (e.g., 72% examined the musculoskeletal system "sometimes"). A fifth (20%) never assessed disability and 13% never examined the musculoskeletal system.

Compared with graduates who had had formal attachments to a rheumatology ward or clinic, those who had never been formally attached (17%) reported less exposure to rheumatological conditions, for example, painful shoulder (42% versus 72%; $P < 0.001$) and were less likely to have been taught the role of the physiotherapist in managing arthritis (56% versus 76%; $P < 0.01$).

Rating of teaching

Rehabilitation and geriatrics were the least popular medical subjects. Graduates were dissatisfied with their teaching in assessment of back pain and disability. Few graduates rated teaching in these areas as good or excellent (22% and 24% respectively), even those who had had formal rheumatology attachments. This compared unfavourably with the more traditional aspects of rheumatology — 57% rated instruction on diagnosis of rheumatoid arthritis as good or excellent. About a third felt not at all or only a little competent at assessing disability (34%) and examining the lower back (31%).

Discussion

In patients with chronic rheumatic diseases, a lack of psychological support, required because of the variable nature of the diseases and their impact on significant relationships, is more of a concern than the disease process itself.¹¹ Yet, our study suggests that training in the assessment of disability and psychological adjustment to illness are not adequately addressed in undergraduate education.

While undergraduate programs cannot give exposure to all clinical and procedural skills, a grounding in basic history taking and examination is expected at this stage.¹² It was of particular concern that assessment of the musculoskeletal system and disability were not seen as part of routine history taking. A recent Australian hospital audit found patients' complaints of musculoskeletal problems were minimised and ignored by admitting doctors.¹³ Similar under-estimations of patients' disabilities have been noted in both hospital and ambulatory care settings in the United States.¹⁴

Responses to self-report questionnaires may not accurately represent graduates' experiences and behaviours. Activities and teaching over the previous six years may well have been forgotten. However, the high response rate (92%) in this study minimised a non-response bias, and a large number of graduates have been included in the study.

In summary, the results indicate significant problems in the training of medical students in musculoskeletal disorders, although improvements have occurred over the past decade. Comparison with an earlier Australian survey⁸ reveals an increase in the number of students completing formal attachments to rheumatology wards (40% in 1981 versus 63.6% in 1991) and outpatient clinics (55% versus 82%). The importance of these formal attachments is not clear but they provide exposure to a greater range of conditions. However, training in the management of common chronic soft tissue rheumatic disorders, such as low back pain and epicondylitis, remain deficient. Rheumatology units (at teaching hospitals) may be unable to provide broad exposure to rheumatological conditions due to a focus on the more "immunological" inflammatory rheumatic diseases.

The finding that recent graduates are not comfortable in assessing disability in patients with musculoskeletal diseases is important, as these conditions are the primary cause of disability in 28% of the 2.5 million Australians classified as having a disability in the 1988 Disability and Handicap Survey¹⁵ and represent a major cost to workers' compensation schemes. Another disturbing finding is the lack of appreciation of the importance of psychosocial factors in chronic musculoskeletal diseases.^{16,17}

These data should provide a stimulus for rheumatologists and medical schools to re-evaluate their teaching priorities in the musculoskeletal diseases to provide medical graduates with a broader training which includes these common chronic disabling conditions.

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