

Managing shoulder pain in general practice

The value of academic detailing

After low back pain and neck pain, shoulder pain is the third musculoskeletal reason for presentation to general practice, with a self reported prevalence of 16–26%. Approximately 1% of the adult population is expected to visit a general practitioner annually for shoulder pain.^{1,2} Shoulder complaints are more common in women and despite the fact that 50% of acute shoulder pain resolves in 8–10 weeks, many patients present with the anticipation of being referred for imaging.

Unpublished Health Insurance Commission (HIC) data from the Imaging Committee, indicated that shoulder imaging had increased several fold from 2000–2002, hence a project was devised to use academic detailing (AD) to ascertain whether upskilling in the history, examination and knowledge of shoulder dysfunction would decrease the use of imaging. The project was undertaken in conjunction with GPs in two divisions of general practice in the Adelaide metropolitan area with no co-location to a radiology service, and follows two previous studies involving shoulder imaging in general practice.^{3,4}

Method

All GPs in each division were invited to participate in the project, which involved a session on how to examine a shoulder, an explanation of when imaging (plain film and ultrasound) should be ordered, as well as an assessment of knowledge of shoulder management based on a 10 item questionnaire. Each GP was also given video materials on examining the musculoskeletal system for future reference. A follow up session at 3–4 months post-AD was arranged to reassess the GP's knowledge base and competence as well as obtaining feedback on the value of the project to the GP.

The number of requests for plain film (MBS item no. 57703) and ultrasound (MBS item no. 55808) images of the shoulder was provided by the HIC for all GPs on a month-to-month basis for the period January 2001 to

December 2004 and was divided into 6 month periods before and after AD.

A log Poisson model was fitted to the HIC data of imaging requests for the GPs who received AD as well as a random control group from the same divisions who did not receive AD. General practitioner knowledge was obtained via a 10 item questionnaire and analysed by chi-squared.

Results

A total of 87 GPs from the two divisions participated in the project, representing 14% of eligible GPs.

Figure 1 shows the time adjusted requests for plain film and ultrasound imaging for the four time periods. There was a significant decrease ($p < 0.001$) in the requests for ultrasound image during the 6 months after AD compared to the usage 6 months previous. This significance dropped to $p < 0.036$ over the next 6 months and failed to have significance during a further 6 months (Figure 1).

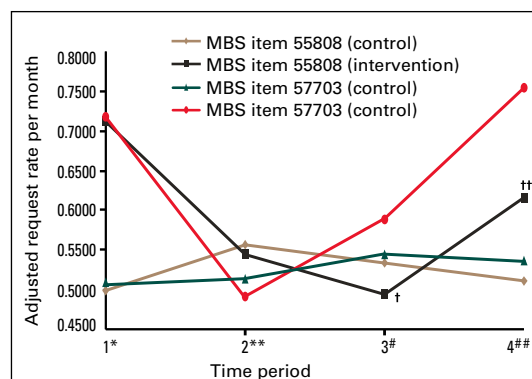


Figure 1. Adjusted rates of requests by time for plain shoulder X-ray

* 2 year period before academic detailing

** Month of academic detailing

6 month period after academic detailing

6 month period after time period 3

† Time period 3 compared with time period 1 in the academic detailing group ($p < 0.01$)

†† Time period 4 compared to time period 3 in the academic detailing group ($p = 0.036$)

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The requests for plain film imaging showed no significant change either before to or after AD.

The mean GP knowledge and standard deviation (SD) before AD was 6.2/10 (1.5). Immediately after AD this rose to 8.6/10 (0.96), $p < 0.001$. At the 3 month follow up, GPs were showing an increase in knowledge; 7.2/10 (1.5) $p < 0.01$.

Three months after AD, GPs reported feeling able to take a more meaningful history and felt more confident managing shoulder pain, and felt that their management of the shoulder had improved (Table 1).

Discussion

The overuse of imaging modalities has been long

recognised, resulting in guidelines for imaging being provided for whiplash associated disorders as well as for ankle and knee dysfunction.⁵⁻⁷ This study has proven that AD can provide cost savings for shoulder problems through a more informed use of ultrasound imaging but not for plain films. Possible reasons might include:

- fear of litigation necessitates 'doing something'
- pressure of short consulting times not allowing for appropriate history and examination
- small numbers of patients work against maintaining skill level.

As proven in the Canadian studies, the introduction of shoulder imaging guidelines

would help to curtail costs, but strategies need to be developed alongside AD to ensure the best practice of cost effective musculoskeletal medicine. Although the sample represented less than 15% of GPs in the two divisions, it is obvious that AD has tangible benefits which could be put to effective use if the requisite resources were available.

Conflict of interest: none declared.

References

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Table 1. GPs' confidence to manage musculoskeletal problems 3 months after participating in academic detailing

Item		N (%)
I found the visit helpful for increasing management skills	Strongly agree	22 (26.5)
	Agree	56 (67.5)
	No change	4 (4.8)
	Disagree	1 (1.2)
	Strongly disagree	0 (0)
I have been able to take a more meaningful history	Strongly agree	7 (8.4)
	Agree	62 (74.7)
	No change	14 (16.9)
	Disagree	0 (0)
	Strongly Disagree	0 (0)
My examination process is better developed	Strongly agree	9 (10.8)
	Agree	65 (78.3)
	No change	9 (10.8)
	Disagree	0 (0)
	Strongly disagree	0 (0)
I am managing shoulder pain more confidently	Strongly agree	6 (7.4)
	Agree	60 (74.1)
	No change	15 (18.5)
	Disagree	0 (0)
	Strongly disagree	0 (0)
From the history and examination I can identify the area/structure of the pain more readily	Strongly agree	6 (7.4)
	Agree	57 (68.7)
	No change	20 (24.1)
	Disagree	0 (0)
	Strongly disagree	0 (0)
My management of shoulder pain has improved since the academic detailing	Strongly agree	10 (12)
	Agree	62 (74.7)
	No change	11 (13.3)
	Disagree	0 (0)
	Strongly disagree	0 (0)