Clinical Radiology (1991) **44,** 363–364

Correspondence

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Letters should be typed double spaced and should be signed by all authors personally. References should be given in the style specified in the Instructions to Authors at the front of the Journal.

MRI OF THE SPINE

SIR–We have read with interest the comprehensive editorial on MRI of the spine (Kerslake and Worthington, 1991) and wish to make the following comments regarding the degenerate disc.

Like the authors we readily acknowledge the ability of MRI to identify accurately disc degeneration. All studies to date have shown a high degree of correlation between MRI and discography in the diagnosis of this condition (Gibson *et al.*, 1986; Schneiderman *et al.*, 1987; Zuchermann *et al.*, 1988; Collins *et al.*, 1990).

We would agree that computed tomography (CT) discography is possibly a valuable second line investigation in those whose MR images demonstrate multi-level abnormality. Likewise we accept the fundamental part played by annular disruption in the pathogenesis of degeneration (Hirsch and Schajowicz, 1952) and recently affirmed by others (Sether *et al.*, 1990). We remain less convinced, however, that CT discography has a role in those patients with a normal MRI study. Whilst a small number of these patients will have a degenerate disc at discography it was our experience that none were symptomatic to pain provocation (Collins *et al.*, 1990).

Based on our reading of the literature and our own experience we would like to make the following points regarding MRI in disc degeneration:

1 Decreases in signal intensity that are present on T2-weighted images are a function of chemical change within the disc and are indicative of degeneration. The signal intensity in a normal disc diminishes little with age (Sether *et al.*, 1990).
2 Disruption of the annulus is a more likely indicator of symptomatology and is fundamental to the development of disc degeneration.
3 The severity of disc degeneration on MRI bears no relation to the presence of symptoms at discography (Collins *et al.*, 1990).
4 MRI should be used before discography to identify those levels that require injection. A disc that appears normal on MRI does not require injection even though a very small number of these may appear degenerate at discography (Collins *et al.*, 1990). In those patients with multi-level disc degeneration on MRI discographic injection is required at all clinically relevant levels in order to identify those which are symptomatic. The use of MRI in this manner will considerably decrease the number of levels requiring examination by discography.
5 To date much surgery for degenerative disc disease has been carried out on the basis of pain provocation at discography. The results are good (Weatherley *et al.*, 1986; Colhoun *et al.*, 1988; Collins *et al.*, 1990) and are unlikely to improve based on MRI findings alone.

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Weatherley, CR, Prickett, CF & O'Brien, JP (1986). Discogenic pain persisting despite solid posterior lesion. *Journal of Bone and Joint Surgery*, **68B,** 142–143.

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PERSISTENT COLONIC SPASM

SIR–After reading the case report on persistent colonic spasm by Massoud *et al.* (1991), there are two points that I would like to make:

1 I wonder whether the intravenous hyoscine butylbromide was given at the beginning of the examination. Judging from the history, the muscle relaxant was clearly not working at the time the caecum was examined. As the effect of hyoscine usually lasts for less than 30 min a repeat injection might have solved the problem.
2 If the caecum is found to be underfilled on screening I always find it helpul to proceed with the lateral decubitis views. With the patient lying on his left side air automatically rises to the right colon. This usually results in a well distended caecum.

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Massoud, TF, Gibson, RJ & Nolan, DJ (1991). Case report: persistent colonic spasm concealing a carcinoma–an uncommon diagnostic pitfall of the barium enema examination. *Clinical Radiology*, **43,** 417–419.

SIR–We wish to thank Dr Poon for his comments. As pointed out in our article, technical deficiencies on the performance of double-contrast barium enemas should be easily recognized and corrected during fluoroscopy. In our report we wished to emphasize that an underlying organic lesion, such as a carcinoma, may produce powerful and persistent colonic spasm despite the administration of 20 mg i.v. hyoscine butylbromide (Buscopan). In our case the unusually strong and painful spasm made it necessary to terminate the examination. Buscopan had been given less than 15 min before the radiographs were obtained, well within the duration of action of the conventional dose. Had the patient tolerated the examination, a further 20 mg of Buscopan would have been given.

Regarding distension of the caecum with air, we routinely make sure the caecum is well distended before the decubitis views are obtained. As seen on fluoroscopy and the radiographs, air had reached the caecum above the area of spasm caused by the carcinoma, but it was felt that this spasm was the main factor in producing inadequate distension.

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PLASMA OSMOLALITY, IODINE CONCENTRATION AND UROGRAPHIC IMAGES

SIR–'. . . sodium iothalamate produced better . . . overall urograms than either of the low osmolar agents' (Todd *et al.*, 1991).

Yes, I admit I'm quoting a little selectively, but lest such an 'economy

with the truth' appear in commercial promotional material, it would be fair to re-inforce three points:

1 There were no significant differences in the pyelograms.
2 The differences in the nephrograms essentially account for the overall differences.
3 The authors speculatively ascribe differences in nephrograms to the effects of a high osmolar load–effects perceived hitherto (Grainger, 1980) as adverse.

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SIR–We thank Dr Lord for his interest in our paper and his comments. He is correct in stating that the differences we found in the pyelogram distension and pyelogram density did not reach statistical significance when taken singly. The 'overall scores' did, however, prove significantly different for the urograms produced by Niopam and Conray, and by Niopam and Hexabrix. Dr Lord is also essentially correct in noting that the differences in the nephrogram accounted for the differences in the 'overall score'. The differences in the pyelogram distension scores which favoured Conray, though not in themselves significant, contributed to the overall scores.

Dr Lord's third point concerns the traditionally held belief that highly osmolar contrast agents produce a poorer nephrogram due to the osmotic water load they carry in the proximal tubules. We are aware of this belief and the valid reasoning behind it and remark upon it in the first paragraph of our paper (line 7). Grainger (1980) states that non-ionic contrast agents produce 'denser' nephrograms which are 'more radioopaque'. No references are given to support this observation and we can find no other paper which compares the nephrographic densities produced by these agents using equal doses of iodine. The osmotic dilution of blood within vessels and urine in the proximal tubules is only one effect out of many that high osmolality solutes induce following injection. It is reasonable to assume that most of the pharmacological, pathophysiological and toxic effects are greater with the highly osmolar ionic contrast agents than with the newer non-ionic agents. Some of these effects have the potential to alter intrarenal blood flow and thus alter nephrographic density.

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WEEKLY MEDICAL UPDATING SERVICE

SIR–I have recently succumbed to a personalized invitation to use a weekly medical updating service run by Elsevier Science Publishers called *Medical Science Weekly*. For the annual subscription of £160, weekly update discs with details from papers in 500 journals are sent, to be transferred onto the hard disc of a PC. This takes about 15 min and one can then search for author, title, keywords, institution in the same way as using a CD-ROM facility. Unfortunately, unlike the *Excerpta Medica for Radiology* sent out by Merck Ltd, which Elsevier also compiles, *Medical Science Weekly* does not include the abstract. When I initially subscribed I was not aware that any NHS doctor is entitled to the discount rate of using Medline at Geneva. Computer time and a phone link to Geneva cost only £15 per hour in total with no subscription fee. Abstracts can be printed out for only 5p each while on line (anomalously cheaper than printing off line!) and many regional librarians are running courses to train users. Until we can read the whole journal from our computers this is surely the next best option.

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JOURNALS

SIR–Being responsible for my Departmental Library, I find myself in a position which is probably far from unique–namely that of having gaps in the journal collection which have proved impossible to fill through conventional channels. Equally, the library possesses a substantial number of extra copies of journals which are surplus to requirements.

If interested colleagues in a similar position could contact me with a list both of their requirements and of any duplicate journals they may have, then I would be happy to co-ordinate any exchanges, hopefully to everone's mutual benefit.

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