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LETTER TO THE EDITOR

Letter to the editor concerning "Cauda Equina Syndrome treated by surgical decompression: the influence of timing on surgical outcome" by A. Qureshi, P. Sell (2007) Eur Spine J 16:2143–2151

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Patient outcomes following surgery after the onset of symptomatic cauda equina compression has important implications for the timing of decompressive surgery and the prospect of patients achieving bladder and bowel continence and retention of other neurological function in the long term.

This article is potentially important because in a literature that contains relatively small studies (unsurprisingly in a relatively uncommon condition) and where most of the studies are retrospective, prospective longitudinal data acquired in 33 patients is potentially a useful addition to the literature.

It is important to distinguish between patients who have an incomplete cauda equina syndrome (CESl) and patients who have a cauda equina syndrome with neurogenic retention of urine (CESR) [1, 2]. In the absence of a complication of surgery, any neurological function that has not been lost, at the point of decompressive surgery, will not be lost. This is why patients who have normal bladder control at the time of decompressive surgery normally have normal bladder control in the long term. This is supported by Qureshi and Sell [3]: 17 of the 33 patients reported were continent of urine preoperatively; 10 of the 17 responded to follow-up questionnaires, none were catheterised, all 10 were happy or satisfied with bladder function.

The debate that is of crucial importance is whether urgent or emergency decompressive surgery is required in patients who have a paralysed bladder at presentation (CESR). There is controversy in the literature, to which Qureshi and Sell have referred. Broadly speaking we can identify three positions from the literature: (1) once the bladder is paralysed surgical decompression will lead to improvement in function in a proportion of patients but when the decompression is performed is not a determinant of outcome [1, 2], (2) if surgical decompression is achieved within 24 h of CESR better outcomes are obtained than surgery delayed beyond 24 h [4, 5] and (3) the window of opportunity extends to 48 h [6]. These conflicting views from the literature can be condensed into two potential principles: the first is a principle that there is a time-dependant relationship between recovery of bladder function after CESR and when the decompression is performed (even if we are not entirely sure when any window of opportunity may close); in which case surgery should be performed as soon as practically possible. The second principle is that once the bladder is paralysed the die is cast for that patient and decompression can be carried out on a routine basis.

Qureshi and Sell do not take that analysis further forward because their data contains a mixture of patients with CESI and CESR. Moreover, the authors looked at the timing of surgery from the onset of first symptom regardless of what the first symptom might have been.

It looks as if about 16 patients had CESR in this study. Sixteen patients were incontinent, 18 patients had absent anal tone and 20 patients had bilateral reduction of perineal sensation (and it is probable that the 16 incontinent patients had both bilateral reduction in perineal sensation and absent anal tone).

I wonder if the authors still have the raw data? It would make a very important contribution to the literature if the 16 patients with CESR could be separated into those

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treated (1) less than 24 h or (2) more than 24 h after the onset of CESR; the two groups could be compared. In a separate analysis the authors could compare patients treated within 48 h after the onset of CESR to those treated beyond 48 h. These seem to be the potential time windows that may be important. The data set is going to be reduced because follow-up data were only available for 12 of the 16 patients who were incontinent at the time of treatment. However, even this reduced data set from data collected in a prospective longitudinal fashion would be of considerable assistance to the wider debate.

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