Quantifying the impact of surgical scars following anterior lumbar spine surgery

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Background
The effects of surgical scars can be far reaching and life changing for many women. The emphasis placed on physical perfection by modern society means that scars can have a significant psychosocial impact\(^1\). Understanding and quantifying the impact of scars is an important aspect of patient management, however, scar size or placement is not routinely considered as a prominent outcome for anterior lumbar spine surgery.

Methods
A postal questionnaire was sent to 188 women aged 18 years of age who had undergone anterior lumbar spine surgery at Nottingham University Hospitals NHS Trust. Questionnaires were followed up via telephone after two weeks if no response had been received. The questionnaire included the Patient Scar Assessment Questionnaire (PSAQ)\(^2\), a modified Female Sexual Function Index (FSFI), and questions relating to urinary and faecal incontinence. Descriptive statistics, chi square and Kruskal-Wallis tests were used to analyse the data. Exclusion criteria: spinal trauma, malignancy, scoliosis.

Results
Responses were obtained from 122 women (64.9%). Five responses were excluded due to substantial missing data, giving a final response rate of 62.2% (n=117).

Scar orientation was reported as vertical by 74.3% (n=84), although only 34.2% (n=39) of respondents would have chosen a vertical incision if they had been given the choice (p<0.01). Scar positioning was associated with perceived scar length (p<0.01), but not width, overall appearance, noticeability, or pain from the scar (p>0.05). Scar length was defined as ‘long’ or ‘very long’ by 72.8% (n=83) and 20.4% (n=23) stated that they were ‘dissatisfied’ or ‘very dissatisfied’ with the length of their scar.

Approximately 1 in 5 women (18.1% n=21) reported that they were very self conscious of the scar (Figure 1) and 26.7% (n=31) felt that their scar was very noticeable to others (Figure 2). Scar appearance was described as ‘poor’ or ‘very poor’ by 16.4% (n=19) (Figure 3), and 27.8% (n=32) reported that they were not satisfied with the appearance of their scar (length of scar p<0.05, width of scar p<0.001, flatness of scar p<0.01, lumpiness p<0.001, scar catches on things (eg. clothes) p<0.01, self-noticeability p<0.001, noticeability to others p<0.001, self-conscious of scar p<0.001).

Satisfaction with surgical outcome was associated with appearance of the surgical scar (p<0.05), how troublesome scar symptoms were (p<0.001), and how often the scar was thought about (p<0.005).

Annotations predominantly focused on the ease or ability to hide scars as well as the impact of the scar on body image and sexual relations. These are summarised in Figure 4.

Conclusions:
Reported difficulties largely focused on aesthetics and impact on quality of life rather than actual scar symptoms. Further research is required to establish prospective data and patient perspectives on surgical scars and outcomes following lumbar spine surgery. Holistic discussions are needed during pre- and post-operative consultations to ascertain women’s ideas, concerns and expectations regarding surgical scars as well as to establish the actual and potential impact of surgical scars.

References: