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Haylen B[1], Hong P[2], Wong A[2], Birrell W[3]
1. *St Vincent's Clinic, Sydney. Australia,* ***2.*** *St Vincent's Hospital, Sydney. Australia,* ***3.*** *Mater Hospital, Sydney. Australia.*

IS PERINEAL EXCISION AT POSTERIOR REPAIR SAFE AND APPROPRIATE? - A HISTOLOGICAL ANALYSIS.

Hypothesis / aims of study: Posterior repair ***(PR)*** often involves excision and repair of anterior perineum (perineorrhaphy). Anatomical benefits have previously been demonstrated though histological safety and propriety has never been confirmed. We firstly hypothesize that no important structures are involved in the excised tissue and therefore it is safe. Secondarily, we hypothesize that, in many instances, the tissues involved will have some abnormal features such that excision might be deemed clinically appropriate. The aims of the study are to determine the histological safety and propriety of a defined perineorrhaphy

Study design, materials and methods: At 50 consecutive ***PRs,*** the much thinned-out area medial and anterior to normal thickness perineum was excised as the perineal component of the ***PR***. Clinical and histological measurements were recorded of the perineorrhaphy width (***PW***) and depth (***PD***). Comparison of ***PD*** was made with the perineal length (***PL*** – anterior perineal edge to anterior anal verge). Histological assessments of all specimens were performed by specialist gynecological pathologists. Figure 1A shows the width and depth of the excised perineum whilst Figure 1B shows the perineal length.

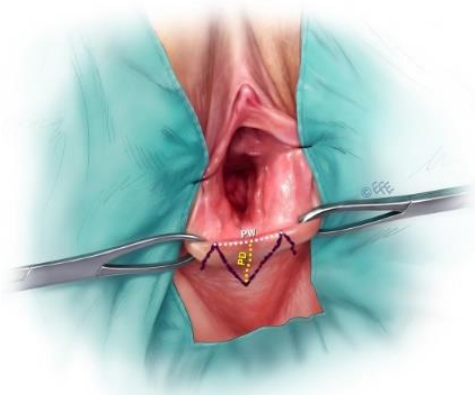


Fig1A: Width (***PW***) / Depth (***PD***) of the excised perineum

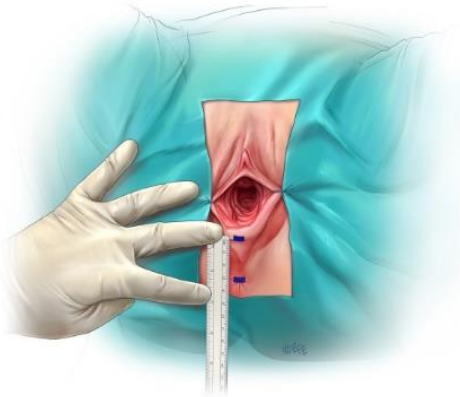


Fig1B: Perineal length (***PL***)

Results

Means (range) for key demographic factors were: (i) age 63.3 (37-90); (ii) parity 2.6 (0-6); (iii) BMI 27.2 (20-46). In addition, (iv) 45(90%) were menopausal; (v) 14(28%) had undergone a previous ***PR***; (vi) 41 (82%) had undergone hysterectomy - 21(42%) prior; 20(40%) intercurrent.

Mean ***PW*** was 2.7cm (range 1.4-5.5). Mean ***PD*** was 1.5cm (range 1.0–2.5); this was 48% of the mean ***PL*** (3.1cm). Despite these being sizable specimens, no important structures e.g. ligaments or muscles were detected in any of the specimens. All specimens consisted of squamous epithelium with loose underlying connective tissue. No ***macroscopic*** abnormality or lesion was detected in any of the fifty specimens examined.

In terms of ***microscopic*** appearances 44 (88%) showed a range of minor changes with only 6 specimens (12%) reported as completely normal. No major pathology, however, was found.

Mild hyperkeratosis was the most common epithelial change, reported in 24 (48%). Scar tissue within the underlying connective tissue was identified in 17 (34%). Twenty-four (48%) samples had inflammation identified. Most of the inflammation observed was nonspecific consisting of scattered lymphocytes just beneath the squamous epithelium. Two (4%) biopsies showed a mild subacute spongiotic tissue type reaction. These biopsies showed spongiosis of the squamous epithelium with a patchy inflammatory infiltrate of lymphocytes. Eosinophils were not identified in these biopsies.

The most significant inflammatory abnormality was identified in 6 (12%) samples. These showed the typical findings of lichen sclerosus with homogenisation of the connective tissue and varying degrees of a lichenoid tissue type reaction. These women did not describe specifically related symptoms and so these findings were entirely incidental. Figures 2A-2D show examples of different changes found at histopathology.

Interpretation of results

Despite a substantial width and depth of perineum being excised, no important structures were encountered histologically. This is perhaps because the excised tissue is thinner, bearing often the effects of parity or prior ***PR***, lying medial and anterior to more normal looking perineum. The rate of minor incidental histological changes is high.

Concluding message

Perineal excision as described appears histologically safe and appropriate with no important tissue structures contained within the excised tissue and 88% showing microscopic histological changes. These findings should give reassurance to surgeons performing a similar perineorrhaphy.

Fig 2A: Lichen sclerosus

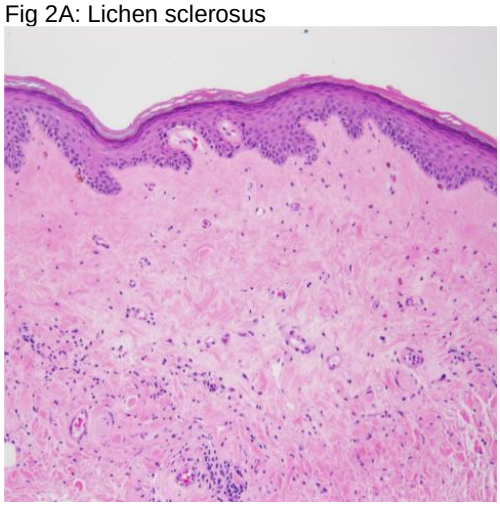


Fig 2B: Inflammation & scarring

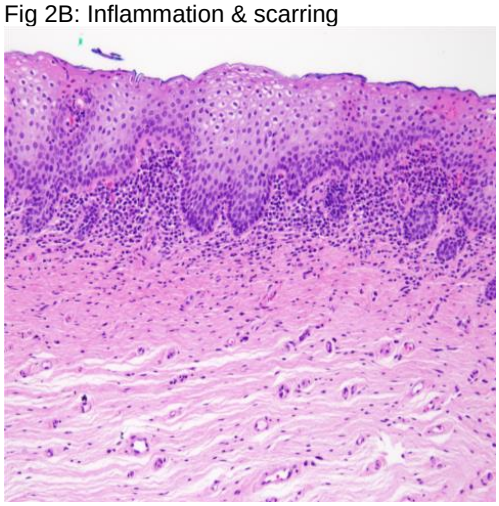


Fig 2C: Scarring, hyperkeratosis & fibrosis

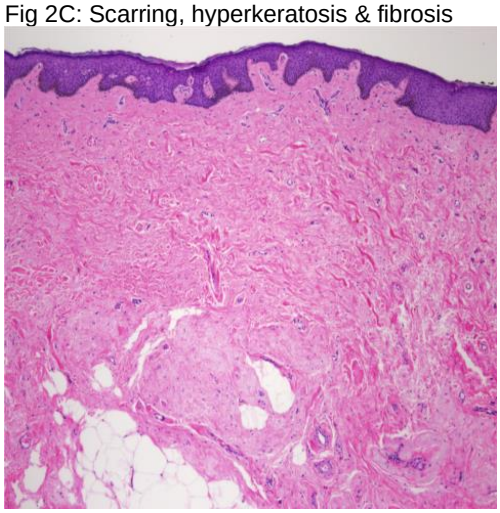
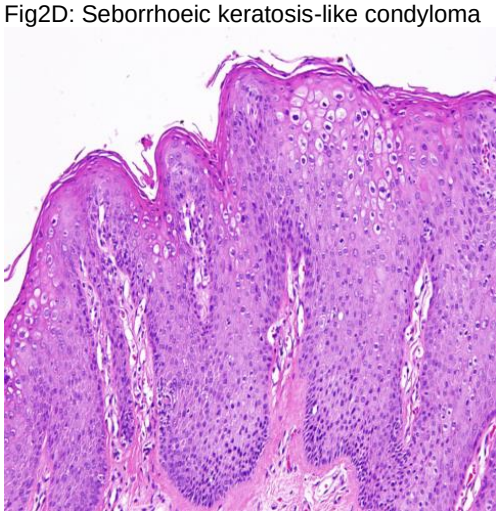


Fig2D: Seborrhoeic keratosis-like condyloma



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2. Int Urogynecol J, 2015, 26:539-544
3. Int Urogynecol J, 2016, 27:165-194; Neurourol Urodyn 35(2):137-168

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