

Suprapannicular Caesarean Section – Is a Thoracic Epidural Really Necessary?

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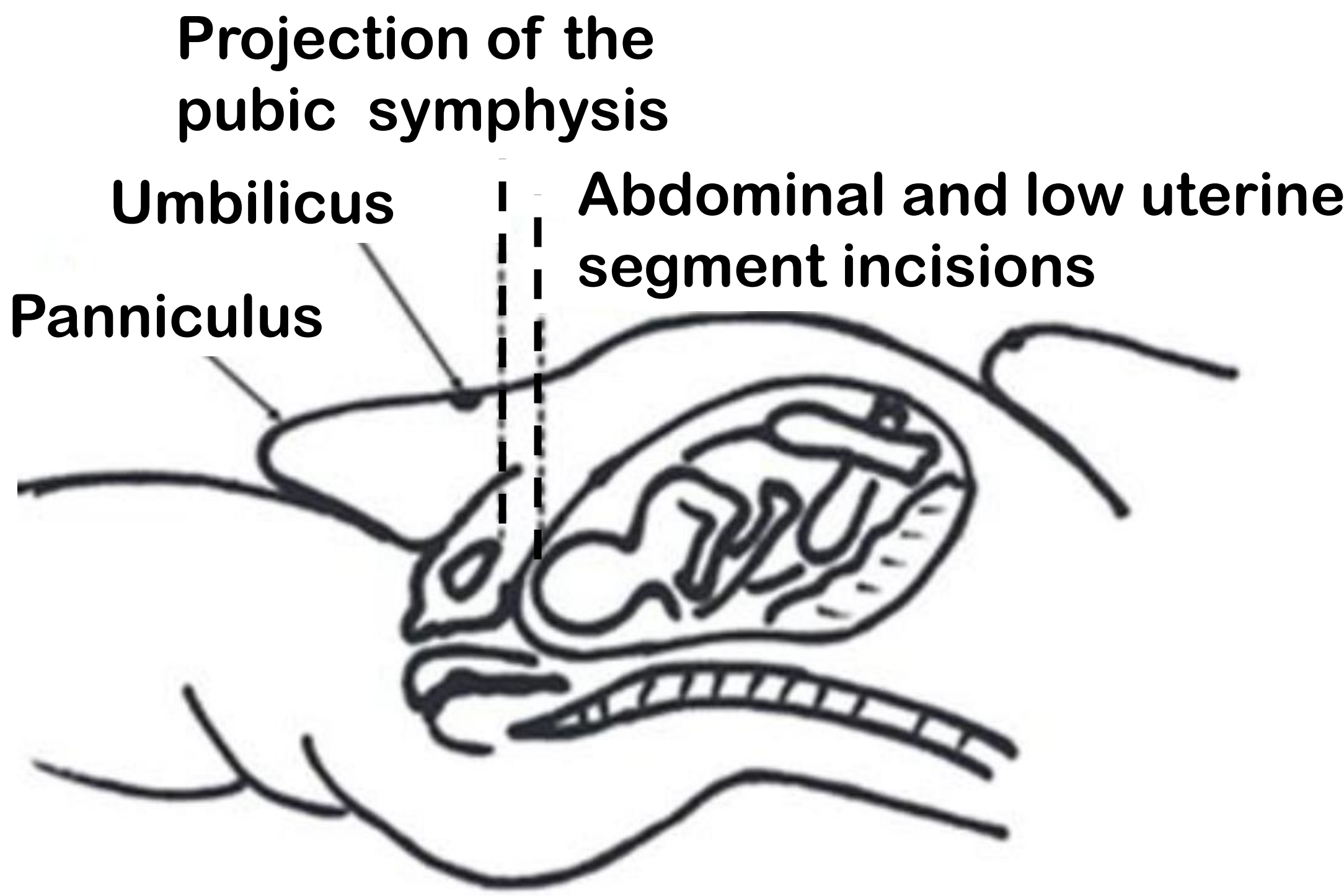


Figure 1 Adapted from Tixier et al (2), the path of a suprapannicular incision.

Demographics/Characteristics	NTE	TE
Total cases reviewed	25	20
BMI, mean(range)	52.2 (36-62)	53.7 (44-75)
Age, mean (range)	31 (20-40)	34 (28-44)
Operating time, mean, mins	67 (50-107)	81 (47-198)
Outcomes		
Post-op oral morphine (mg), mean(range)	52.0 (0-220)	53.5 (0-180)
LOS, days, mean(range)	3.6 (2-7)	4.1 (2-10)
% of cases with additional anaesthesia	28	30
% conversion to GA	18	16

Table 1- demographics and outcomes “No thoracic epidural” (NTE) vs “Thoracic epidural” TE

DISCUSSION

This service review, though small numbers, shows no clear outcome difference between TE and NTE groups for LOS or postoperative opiate use for suprapannicular LSCS.

A slightly greater BMI, age and longer mean operating times were noted within the TE group. Where BMI is greater, there may be a greater likelihood of the pannus placing the umbilicus below the projected pubis symphysis, and hence requiring a supraumbilical LSCS incision. Where the incision remains above the umbilicus, a TE is better suited to cover dermatomes postoperatively than a lumbar level. GA conversion occurred in 7 (4 NTE vs 3TE) out of 42 cases. These cases were all associated with additional surgery, or an emergency setting; reflecting perhaps the difficulty in siting neuraxial anaesthesia for this patient group in time critical scenarios.

Given our findings, we summarise that only those patients undergoing additional planned procedures (outside of LSCS), a planned supraumbilical incision, and/or at the higher end of BMI or additional risk factors for postoperative respiratory dysfunction merit a thoracic epidural. Aspects such as anaesthetic time and length of epidural infusion would be of interest for future evaluations of care, however an accurate means of recording and gathering this data needs to be established.

INTRODUCTION

Severely obese parturients undergoing caesarean section (CS) have increased rates of surgical site infections (SSI) ⁽¹⁾. Incisions above the panniculus aim to reduce infection by keeping the surgical site open to air. A modified skin incision as described by Tixier et al ⁽²⁾, evolved at our institution for such patients since 2017. Initially a thoracic epidural (TE) with lumbar spinal was performed. Now, local practice has evolved to a standard length infra/sub-umbilical transverse skin incision. We questioned if a TE was needed.

METHODS

Institutional information governance approval was obtained. Cases were identified from the surgeon’s log and data was collected from hospital electronic records for: operating time, BMI, weight, age, type of planned anaesthesia, presence and level of TE, additional intraoperative anaesthesia (opiate boluses, epidural top up, convert to GA), incision site, postoperative opiate use and length of stay (LOS)

Mean and range for demographics and outcomes were calculated or percentage of cases as applicable.

RESULTS

Within the 46 cases, 45 were reviewed (one anaesthetic chart was unavailable). Twenty patients had a TE and 25 did not (NTE). Three of the operations in the NTE group were a planned GAs. Patients in the TE group were marginally of greater BMI and age. The average operating time for the TE group was 14 minutes longer than the NTE group, perhaps alluding to more complicated cases. Patient outcomes were similar between groups, with marginally smaller postoperative opiate requirements and shorter LOS seen in the NTE group.

WHEN A THORACIC EPIDURAL?

- Incision above umbilicus
- Additional post op respiratory dysfunction risk factors
- Extremes of BMI: case by case discussion



WHEN A LUMBAR EPIDURAL?

- Infra/sub-umbilical incision
- Often quicker insertion and lower risk profile
- No additional post op. respiratory dysfunction risk factors