Comparative benefits of epidural analgesia following hysterectomy and colonic resection

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Background: Treatment of postoperative pain is most effective when delivered using procedure-specific criteria, taking into account the type of surgical procedure, patient co-morbidities and the risks and benefits of different analgesic regimens.[1] This systematic review examines the comparative benefits of epidural *versus* systemic analgesia following hysterectomy and colonic resection.

Methods:

1. Systematic literature review using the Cochrane Collaboration protocol (MEDLINE, EmBASE, 1966–Jan 2004)
2. Selection of randomised trials of analgesic interventions in hysterectomy and colonic resection, reporting pain on a linear scale (0–100)
3. Qualitative and quantitative analyses of selected studies

Results:
Studies compared epidural strong opioid, local anaesthetic or both with systemic analgesia

	Number of studies:			**Quantitative analyses Epidural vs. systemic** (weighted mean difference, WMD)
Postoperative outcomes	**Reporting outcome**	**Showing significant benefit of epidural**	**Showing non-significant result**	
Hysterectomy, n=5				
Pain score	5	2	3	4 h, n=3, WMD -12.52 [-22.97, -2.07], p=0.02
				20 h, n=3, WMD -6.30 [-14.64, 2.05], p=0.14
Opioid use	3	2	1	nd
Time to flatus	1	0	1	nd
Time to bowel movement	1	0	1	nd
Ileus	0	nd	nd	nd
Hospital stay	1	0	1	nd
Colonic resection, n=8				
Pain score	8	8	0	3–8 h, n=2+2 arms, WMD -19.42 [-24.36, -14.47], p<0.00001
				24 h, n=4+2 arms, WMD -14.71 [-19.61, -9.80], p<0.00001
Opioid use	4	4	0	nd
Time to flatus	3	3	0	nd
Time to bowel movement	5	5	0	n=2+2 arms, WMD -0.98 [-1.58, -0.37], p=0.002
Ileus	1	0	1	nd
Hospital stay	6	0	6	nd

nd=no data

Conclusions and discussion:

Epidural analgesia was effective for reducing postoperative pain and opioid use following both hysterectomy and colonic resection. However, these results were clinically meaningful only for colonic resection. In addition, a significant reduction in the time to recovery of bowel motility with epidural analgesia was shown only for colonic resection.

Factors influencing postoperative patient recovery are more complex than the mode of analgesic administration alone, however, these results argue for the routine use of epidural analgesia in colonic resection but not in hysterectomy. These findings reinforce the need for procedure-specific guidelines for postoperative pain.

Reference:

1. Fischer B, *et al*. Procedure-specific practice for managing pain following primary total hip arthroplasty: recommendations on peripheral and neuraxial analgesia from the PROSPECT working group. Poster presentation at ESA Lisbon, Portugal, 2004