

Effects of the use of preoperative GnRHa analogue and intra-operative mechanical tourniquet for myomectomy on surgical blood loss: A randomised controlled trial

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March 31, 2021

Abstract

Objective To compare the pre-operative use of GnRH analogue and/or intra-operative use of tourniquets to determine which intervention best reduces the intraoperative blood loss at open myomectomy. **Design** Randomised controlled trial, partially blinded (clinician and participant) **Setting** Single tertiary centre **Population** Women requiring open myomectomy in our gynaecology outpatient clinic **Methods** Patients were allocated to receive either pre-operative GnRHa, intra-operative mechanical tourniquet or a combination of preoperative GnRHa and intra-operative mechanical tourniquet. **Main Outcome Measure** Mean intraoperative blood loss **Results** There was a difference in mean intra-operative blood loss of groups GnRHa (n=14) versus Tourniquet (n=12) (752ml, 95% CI 148ml-1355ml, p=0.01) and groups GnRHa versus GnRHa+ Tourniquet (n=17) (804ml, 95% CI 250ml-1357ml, p=0.002). No significant difference in intra-operative blood loss between groups Tourniquet and GnRHa+ Tourniquet (52ml, 95% CI -630ml-526ml, p=1) were detected. A sub-analysis showed that there is no statistical significance (p=0.45) between mean blood loss at surgery and uterine size across the groups. **Conclusions** The use of a mechanical tourniquet with or without pre-operative gonadotrophin releasing hormone analogues is significantly more effective at reducing intraoperative blood loss at open myomectomy than the use of pre-operative gonadotrophin releasing hormone analogues alone **Tweetable Abstract** Mechanical tourniquet with or without GnRHa significantly reduces intraoperative blood loss at open myomectomy **EudraCT Number** 2010-019810-26

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Figure 1 Trial Profile.pdf available at <https://authorea.com/users/405169/articles/516185-effects-of-the-use-of-preoperative-gnrha-analogue-and-intra-operative-mechanical-tourniquet-for-myomectomy-on-surgical-blood-loss-a-randomised-controlled-trial>