



The power of level-1 evidence in umbilical hernia repair: mesh repair is supported by strong evidence

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Dear Sir,

In their recent letter, Tao and Huerta commented on a meta-analysis by Aiolfi et al. comparing open mesh versus suture repair of umbilical hernias including six randomised controlled trials (RCTs). An interesting addition in their letter is that the numbers are very convincing since they are based on an analysis of 742 patients (383 mesh repairs and 359 suture repairs). Recurrence rates between 0.0–4.0% after mesh repair and 7.0–17.0% after suture repair with no significant difference in postoperative complications are reported [1]. The included RCTs are strongly in favour of mesh: this is the result of a randomised and controlled approach in all studies and double-blinded approach in at least four out of six studies. To date there have been no RCTs comparing mesh and suture in umbilical hernia that are in favour of suture repair.

The first report of mesh repair in inguinal hernia by Phelps [2] sparked an interest in mesh repair in general. The use of mesh in inguinal hernia, but also in incisional and umbilical hernia was investigated extensively, especially in recent decades. Unfortunately, there are no high quality follow-up data, let alone RCT data, on patients from the Shouldice clinic published in peer-reviewed journals.

In an ideal world every clinical decision should be based on RCT results, and we agree that not all situations are feasible to this approach. Alternatively prospectively tracking daily practice results in registries may be valuable, yielding the same outcomes as the previous mentioned RCTs [3].

To assist clinical decision making for individual cases, some guidance may be helpful. Therefore the American and European Hernia Society teamed up to review all available evidence and developed guidelines for the surgeons and patients in clinical decision making in case of an umbilical hernia under normal, but also under special circumstances [4, 5]. After reviewing all available evidence, a strong recommendation could be formulated, being: it is recommended that mesh is used for repair of umbilical and epigastric hernias to reduce the recurrence rate. Sutured repair can be considered in shared decision-making and for small hernia defects of less than 1 cm [4].

Based on the currently available evidence, mesh is recommended in most patients. Suture repair may be feasible as well, but should only be considered in certain circumstances: patients with small umbilical hernia defects (< 1 cm), patients that refuse mesh and women of childbearing age that wish to become pregnant [4, 5]. In this special situation the recommendation is that if hernia repair cannot be postponed until after the last pregnancy, a sutured repair is suggested for umbilical and epigastric hernias in women of childbearing age. A mesh repair could be performed after the last pregnancy [5].

In short: overwhelming evidence favours mesh repair of umbilical hernia and leaves suture repair as “second best” in selected patients that cannot or will not undergo mesh augmentation.

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