Draining malignant ascites at home

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Abstract

Background: Malignant ascites is a common problem in palliative care. Up to 6% of all patients admitted to palliative care units suffer from ascites. Liver cirrhosis is the most common cause of ascites. Malignancy causes 10% of all ascites. The pathophysiology differs between malignant ascites and other causes of ascites. Regardless of its cause, ascites can cause severe symptoms. The local symptoms are usually discomfort, pressure and pain in the abdomen as well as nausea, vomiting and early satiety. It can also lead to systemic symptoms such as fatigue, dyspnea and edema in the lower parts of the body The palliative team at SSIH Nyköping (Specialized palliative care at home), has decided to acquire an ultrasound machine to be able to perform paracentesis in the home.

Aim: To learn if there is scientific support for intermittent paracentesis as a method for relieving symptoms of malignant ascites and to seek information and possible evidence about the efficacy and safety of paracentesis in the patients' home with the support of a portable ultrasound. Based on this information write a local clinical procedure for ultrasound guided paracentesis of malignant ascites at home for patients enrolled in SSIH Nyköping.

Methods: A literature review was performed using PubMed and Cochrane data bases as well as information from textbooks and clinical guidelines from several Swedish regions. Procurement of an ultrasound Secma SonoSite iViz.

Results: Thirty-eight published articles were included in the review. There is only weak scientific support regarding the safety and efficacy of paracentesis to alleviate symptoms of malignant ascites. There is a lack of randomized trials and the studies available are small. From the studies included in this review, paracentesis is found to be a safe and efficient treatment, also when performed in the patients' home. It is deemed safe to drain ascites freely without clamping. There is no consensus regarding how long to keep draining, the time varying from 30 minutes up to 24 hours. The most significant improvement in symptoms occur after the initial drainage of up to ca 5 L. Routine intravenous Albumin treatment when performing paracentesis in malignant ascites has no scientific support. The risk of side effects is 5.5% with hypotension being the most common. Deaths after paracentesis have been described in up to 3% of cases in a palliative population. A portable ultrasound is a useful tool in diagnosing ascites. However, there is no consensus whether ultrasound should always be used when performing paracentesis.

Discussion: Even though the scientific support for paracentesis as treatment for malignant ascites is poor, it is a widely used technique. The guidelines available are based on empirical data. Clinical studies focusing on best possible technique and safety issues are needed.

Conclusion: Based on available studies, paracentesis is an effective and safe treatment for alleviating symptoms from malignant ascites with free drainage of up to 5 L during no more than 6 hours. Home based paracentesis is deemed safe and ultrasound is considered a helpful or even necessary tool. These findings were used as a basis when writing a clinical procedure for SSIH Nyköping regarding therapeutic paracentesis with ultrasound guidance in a home setting, for free drainage of ascites.