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# Stomas from a rural perspective

An evaluation of characteristics, differences  
and improvement opportunities

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## Akademisk avhandling

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**Title** Stomas from a rural perspective - An evaluation of characteristics, differences and improvement opportunities**Abstract**

**Background:** Stoma-related complications are common and consequences for the individual patient may be considerable. In rural areas, competence regarding stoma-related problems is largely absent. Since the aim of a publicly funded healthcare system is good healthcare on equal terms regardless of where one lives, studies evaluating differences and possible areas of improvement in rural areas are important. An evaluation of stoma-related characteristics, geographic differences and improvement opportunities from a rural perspective has not been done previously.

**Methods:** Epidemiological methods applied to register data were used in Study I. Data extracted from the National Rectal Cancer Register together with socioeconomic data from Statistics Sweden were used. Study II was a cross-sectional study using surveys matched with data from the National Rectal Cancer Register. Study III was based on data from a double-blind randomised controlled trial. Patients were randomised to either a prophylactic mesh or no mesh in order to prevent parastomal hernia (PSH). In Study IV, a qualitative explorative method was applied to describe the quality of life of rural living stoma patients.

**Aims and results:** Study I investigated whether distance by road to hospital had an impact on the following outcomes: stoma reversal rate; time from index operation to stoma reversal; and occurrence of permanent stoma after rectal cancer surgery. Longer distance to hospital had no effect on these outcomes in a multivariate model. In the univariate logistic regression model results indicated the opposite; patients living closest to the operating hospital had a higher likelihood of no reversal (OR 0.3; 95% CI 0.12–0.76). In northern Sweden, 77 % of all stoma reversals were delayed more than 6 months after index surgery.

Study II investigated the impact of distance to nearest hospital on the QoL of rectal cancer patients who had received a stoma at index surgery. Patients living in rural areas reported more pain and sore skin compared to those living closer. When only considering patients who still had a stoma, global QoL was reduced and stoma-related problems were also affected negatively in the rural group.

Study III investigated whether a prophylactic mesh when creating an end colostomy affected QoL. No effect on global QoL was seen at one-year follow up. In several other QoL-parameters mesh patients scored superior compared to non-mesh patients, even when excluding those with a parastomal hernia.

Study IV investigated experiences of living with a stoma in a rural setting, how the process of seeking healthcare was experienced and the problems that occur. Results show that living with a stoma was experienced as a process; an initial sense of hopelessness, especially when suffering from stoma-related problems, progressing to the crucial acceptance of their situation.

**Conclusions:** The notably high rate of delayed reversal of a defunctioning stoma in northern Sweden leads to unnecessary suffering for patients. Rural living rectal cancer patients who receives a stoma reported more pain than those living closer to the nearest hospital. Rectal cancer patients who still had a stoma reported an inferior quality-of-life and more stoma-related problems compared to their town counterparts. The use of a prophylactic mesh when forming an end colostomy has no impact on subsequent global QoL. Rural living stoma patients commonly experience problems related to their stoma that affect their everyday living. Improved patient education shortly after receiving a stoma could help these patients in coming to terms with their situation.

**Keywords**

rural, defunctioning stoma, permanent stoma, stoma reversal, distance, quality-of-life, parastomal hernia, mesh, prophylaxis, colostomy, urostomy, ileostomy, content analysis

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