

Thesis: Depression and delirium in patients undergoing cardiac surgery

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Anna Falk at the research group Thoracic Surgery, Department of Molecular Medicine and Surgery, will defend her thesis "Depression and delirium in cardiac surgery patients" on May 26, 2023. Her main Supervisor is Malin Stenman.

What's the main focus of your thesis?

The thesis focuses on depression and [delirium](#) in patients undergoing [cardiac surgery](#). Depression is two to three times more common in persons with [heart disease](#) than in the [general population](#) and can lead to serious consequences after cardiac surgery, such as poorer adherence to secondary prevention medications, poorer quality of life and increased risk of death.

Another complication that can affect the prognosis after cardiac surgery is [postoperative delirium](#) which is an acute state of confusion. Different types of delirium are often divided into subgroups based on motor activity: hyperactive delirium (restlessness, agitation) or hypoactive delirium (somnolence, withdrawal). Hypoactive symptoms can be difficult to detect and can be mistaken for depression.

Postoperative delirium affects 25%–50% of all patients undergoing open cardiac surgery and can generate serious consequences such as pressure ulcers, falls, and prolonged hospital stays. There is no effective medical treatment for delirium, but the condition can often be prevented through preventive measures.

The overall aim of the doctoral project was to investigate the significance of depression for prognosis, both in the long and short term, in patients undergoing cardiac surgery.

Which are the most important results?

In two of the studies in the thesis we confirmed that preoperative depression is significantly associated with an increased risk of delirium after cardiac surgery.

In an interview study with patients recovering from hypoactive delirium, experiences of being in a parallel reality and having strong emotions such as fear and shame were described. Delirium was described as significantly more extensive than what had been noted by staff, an indication that hypoactive delirium is being overlooked.

The last study found that self-reported depressive symptoms before cardiac surgery were significantly associated with worse long-term survival. After eight years, there was a 10% difference in survival between people who reported [depressive symptoms](#) compared to those who were not depressed.

In conclusion, depression is a significant and independent risk factor for postoperative delirium and poorer long-term survival after cardiac surgery.

How can this new knowledge contribute to the improvement of people's health?

The reported association between depression and postoperative delirium as well as depression and poorer survival after cardiac surgery supports depression screening before cardiac surgery as recommended by international guidelines. Screening for depression should be performed already in primary care so that measures can be taken. Delirium is still overlooked. The use of screening tools in [clinical practice](#) is essential for early and continuous detection of all types of delirium and for implementing measures to improve our patients' post-operative care.

What are your future ambitions?

The work with this thesis has generated many ideas. In the future, I want to combine [clinical research](#) with clinical work as a nurse in the thoracic

intensive care unit as well as providing anesthesia during thoracic surgery.

More information: Depression and delirium in cardiac surgery patients: openarchive.ki.se/xmlui/handle/10616/48583

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