Bile acid loss syndrome
A phenomenon associated with specific urological operations

Bile fluid is produced in the liver (approx. 900 ml /24 h) and stored in the gallbladder. Together with the pancreatic secretions, the bile is released into the duodenum and reabsorbed and reused in the enterohepatic circulation. Bile is necessary for good digestion and contains bile acid, cholesterol, phospholipids and bilirubin, fatty acids and proteins.

During food intake, bile acid is released into the small intestine, where it helps to break down the nutrients, especially fats. This enables the body to absorb the fats. Bile acids act as a “solvent” for cholesterol and supports the absorption of the fat-soluble vitamins A, D, E and K. The bile acid is reabsorbed into the bloodstream at the lower end of the small intestine (terminal ileum) and returned to the bile acid circulation. In addition, the bile fluid reduces the acidity of the food from the stomach.

Bile acid that is not reabsorbed ends up in the colon where it does not belong. There it prevents the reabsorption of water from the colon and stimulates peristalsis. As a result, liquid stool is excreted, is lead to gallstones.

If possible, search for and treat the cause of the loss of bile acid (e.g. Crohn’s disease). If the terminal ileum fails in its function due to illness or surgery, one can assume that the bile acid loss syndrome occurs.

**Causes**

- Diarrhoea (Cholegheo diarhoea)
- Fatty stools
- Cramp-like pain, which is often relieved by abstinence from food
- Low levels of fat-soluble vitamins A, D, E and K can be associated with the loss of bile acid.
- Since the bile acid is not reabsorbed, there is a deficiency of bile acid in the gallbladder. This can lead to gallstones.

Under normal physiological conditions, calcium is bound to fatty acid in the intestine and thereby excreted. In fatty stools, calcium is bound to oxalic acid in the intestine and thereby be assumed that the terminal ileum fails in its function due to illness or surgery, one can assume that the bile acid loss syndrome occurs.

**Diagnostics**

- Optical: Detection of fatty stool
- From certain causative factors, the bile acid loss syndrome can be deduced. I.e. if terminal ileum fails in its function due to illness or surgery, one can assume that the bile acid loss syndrome occurs.

**Therapy**

If possible, search for and treat the cause of the loss of bile acid (e.g. Crohn’s disease).

The symptoms of diarrhoea after neobladder or bladder augmentation can be positively influenced with exchange resin (cholestyramine). The correct dosage for treating the symptoms while preventing constipation, should be determined empirically.

In the case of bile acid loss syndrome after using the terminal ileum for a urological operation the diarrhoea stops immediately after taking the first dose of cholestyramine.
Dear EAUN members,

My motivation to apply to become a member of the board started while working on the latest prostate EAUN Guidelines, and has grown after attending the EAUN conference in 2019. I am professionally engaged and love constantly gaining new knowledge – that is one of my strengths. I have also been professionally involved as a member of a national group for improving catheterisation equipment in Norway.

I find it inspiring to teach and have taught on the programme for improving catheterisation equipment in Norway and started my career at Kristiansund Hospital on the northwest coast of Norway. I now work with urological topics – as a urotherapist – in an outpatient clinic of the same hospital.

I also have two qualifications for further education: Specialist Nurse in Rehabilitation (4600, 60 study points) and Urotherapy (Bergen, 60 study points).

As a urotherapist, my main responsibilities include patient observation through various urological tests, urodynamics tests, and to take medical histories and guide patients to better cope with their illnesses. I monitor paediatric and adult patients with various bladder dysfunctions, assist urologists performing prostate biopsy and do the follow-up for patients who have undergone radical prostatectomy for prostate cancer.

For the last 12 years, I have been involved in conducting a 2-day course for patients who have or had prostate cancer twice a year.

By joining the EAUN Board I hope I can use my qualities and engagement to work together with other people in Europe for better healthcare in Norway and other European countries. Together we can achieve much more!

I’m looking forward to seeing you all at the next International EAUN Meeting in Milan.

With kind regards,
Ingrid Charlotta Klinge Ieersen

EAUN Fellowship Report
Learning experience at Berne University Hospital (Inselspital), Switzerland, 6–20 July 2020

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European Association of Urology Nurses

My name is Elena Zouzoula and I am a registered nurse from Greece. In 2014, I completed my nursing studies. In 2018 I earned my master degree in Health Science Informatics and now I’m studying for my second master degree in Health Services Management. I have been working at the General Hospital of Santorini since 2016, mostly at the emergency department.

Santorini is a small and popular island in the South Aegean of Greece. It is considered to be the lost Atlantis. Santorini is well-known for its beautiful sunset, the volcano and sea view from the Caldera, attracting more than 1 million tourists per year, especially during summer.

The General Hospital of Santorini is one of the three general hospitals in Santorini. It is located in Karterados, a village of Santorini, and is open 24 hours a day. It is equipped with 37 beds and has 154 employees. The health service is responsible for two sections, the surgical and the clinical section. The urological cases fall within the surgical field, as there is no autonomous urological department. However, there is a urological office at the outpatient clinic, as well as facilities for urological patients to get examined at the emergency department, operated in the operation theatre and hospitalised at the main clinic. Every year the hospital admits approximately 450 urological patients.

The hospital employs 1 urologist and the main fields of action are: UTI, stone treatment of the urinary tract, urinary retention and neurogenic bladder. Main operations taking place are: TURP and testicular torsion. The nursing team consists of 1 nurse director, 2 head nurses, 17 registered nurses and 8 assistant nurses. Each member of the team is responsible for different types of treatments, such as minimal specialised treatments are offered, such as minimal invasive prostatic treatment and extensive reconstructive surgery for all urological disorders.

The programme was as follows:
- Welcome & Introduction to the Department of Urology
- Monday 7 July
- Visiting the operation theatre: cystectomy and ileal conduit
- Attending the educational meeting
- Tuesday 8 July
- Accompanying the nurse for patients with ileal conduit and ileal conduit
- Pelvic floor training
- Friday 10 July
- Operation theatre: URS Stone treatment
- Monday 13 July
- Urostoma Care
- Palliative Care
- Tuesday 14 July
- Operation Theatre: TURP
- Wednesday 15 July
- ICU
- Attending the educational meeting
- Thursday 16 July
- Bladder dysfunction, intermittent self-catheterisation
- Friday 17 July
- Accompanying the nurse at the ward

The second day of the fellowship programme included a visit to the operation theatre. It was the day that impressed me the most. I had the chance to see a cystectomy and how a stoma with external drainage was being created.

After the operation, Kathi Ochner, an expert urology nurse, explained to me that nowadays, with the coronavirus planning.

Palliative care
At the palliative care centre, I had the pleasure of meeting Mrs. Monika Fliedner, a nurse specialised in palliative care. She showed me around in the centre and in the meantime we had a conversation on what palliative care means and can offer and about the SENS structure for palliative assessment and planning.

Palliative care is more than just painkillers. Monica explained to me that nowadays, with the coronavirus in the foreground, palliative care can play a very important role, and take away some of the workload from other nurses, as palliative care nurses will talk to the patients and their relatives about end-of-life decisions and offer them alternatives.

The ward
The ward consists of two floors with single, double and triple rooms. The nurses of the ward were friendly and full of smiles. They explained to me what they did and how they organised patient care. They are responsible for three or four patients and they take care of all their individual needs. Patients stay at the hospital alone, so nurses are the persons that take care of patients and patients can rely on them for everything. In Greece is not the same. There is a shortage of nurses in every hospital, which means that they do not have the time to provide all the necessary care. For this reason, the patients’ relatives contribute to their care.

Outpatient clinic
In the outpatient clinic, nurses specialise in various fields. I accompanied Daniela, a nurse specialised in self-catheterisation. That day, she taught a male patient how to self-catheterise. This procedure took 1 hour and a half. They tried it three times with different types of catheters, until the patient felt comfortable trying it at home and figure out which one is easier for him to use. She explained each step of the catheterisation to the patient in detail and also answered his questions and concerns.

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