# Preoperative biliary drainage for pancreato-biliary tumors causing obstructive jaundice; DRainage vs Operation.

No registrations found.

| | |
|---|---|
| **Ethical review** | Positive opinion |
| **Status** | Recruitment stopped |
| **Health condition type** | - |
| **Study type** | Interventional |

## Summary

### ID

NL-OMON20283

**Source**
NTR

**Brief title**
DROP-trial

**Health condition**

Obstructive jaundice due to a pancreatic head area (pancreas, papilla, distal bile duct) tumor.

### Sponsors and support

**Source(s) of monetary or material Support:** ZonMw

### Intervention

### Outcome measures

**Primary outcome**

Percentage of patients with severe complications due to drainage or postoperative within 120 days after randomisation (90 days after surgery).

### Secondary outcome

1. Hospital stay;

2. Number of extra invasive diagnostic procedures;

3. Costs;

4. Quality of Life;

5. Analysis of CT criteria for resectability.

## Study description

### Background summary

Patients with obstructive jaundice caused by a tumor in the pancreatic head area (pancreas, papilla, distal bile duct) undergo several diagnostic procedures to evaluate resectability of the tumor. If no metastases or local tumor ingrowth in the portal vein is found these patients are eligible for resection, the only chance for cure. Unfortunately, surgery in these jaundiced patients is associated with a higher risk of postoperative complications compared with surgery in non jaundiced patients.
Therefore preoperative biliary drainage was introduced in an attempt to improve general condition (liver function, renal function, nutritional status and immune response) and by that reduce postoperative morbidity and mortality.
Later on, the focus has shifted towards the negative effects of drainage, such as an increase of infectious complications. This has raised doubts as to whether a biliary drainage should always be performed in these patients.

Despite this controversy in management preoperative biliary drainage is generally accepted in the Netherlands partly because ERCP has been used in the past as the first diagnostic procedure and for other logistic reasons (to have more time for further investigation).

The therapeutic dilemma remains whether or not these jaundiced patients should have preoperative biliary drainage. The proposed project involves a randomized multicenter trial to compare the outcome of “a preoperative biliary drainage strategy” (standard strategy) with that of an “early surgery” strategy, with respect to the incidence of severe complications (primary outcome measure), hospital stay, number of invasive diagnostic tests and costs.

### Study objective

Early surgical treatment (exploration followed by resection (pancreatoduodenectomy or bypass) in patients with obstructive jaundice due to a pancreatic head tumor is equivalent in terms of severe complications of treatment compared with patients who underwent

preoperative biliary drainage (4 weeks) and subsequent surgery, while reducing hospital stay, the number of invasive diagnostic procedures (ERCP) and results in lower overall costs.

**Study design**

N/A

**Intervention**

1. Preoperative biliary drainage: Drainage procedure will be performed within three days after randomization for a total of 4 weeks;

2. ERCP and preoperative biliary drainage will be performed by an experienced endoscopist, preferably by endoscopically insertion of a (plastic)stent;

3. One stent is generally sufficient because only distal obstruction is included;

4. If ERCP is not successful, patient can be referred to a center for a second attempt for endoscopic drainage or a percutaneous drainage will be performed according to local experience;

5. Biliary drainage is considered adequate if a decrease of > 50% of serum bilirubin level is found after 2 weeks of drainage; otherwise the stent should be changed;

6. Exactly four weeks of preoperative biliary drainage patients will undergo surgery. In case of complications after ERCP or during the biliary drainage period (cholangitis, stent occlusion) a stent exchange will be performed;

7. Other complications, such as bleeding or severe pancreatitis, should be treated according to the general locally accepted treatment protocol and/or consensus about management (46,47) and could consequently lead to a delay of surgery;

8. Preoperative nutritional support (e.g. consultation with a dietician, nutirdrink, ) is recommended in patients with a weight loss of more than 15% during the last 3 months.

Surgical treatment: Surgery will be performed within one week after randomization. Guidelines for exploration and treatment are described below

9. Surgery should be planned keeping in mind that the maximum estimated bilirubin level (> 40 µmol/l and < 250 µmol/l at randomization) must not exceed 300µmol/l, 24 Hours before surgery. (e.g. high bilirubine at randomization requires earlier surgery);

10. Vitamine K (10 mg, oral, 1 day preoperatively) is given on indication and cefuroxim (1500 mg, intravenous single shot, ½ hour preoperatively) and Sandostatine (or other analogues)

(3x 100 µg, subcutaneous, 12 hours before surgery and continued for seven days after surgery) as profylaxis;

11. During exploration the standard procedure will be the standard pylorus preserving pancreatoduodenectomy(46,47) as previously described (removal lymph nodes right side of portal vein5,33)) If indicated (suspicious ingrowth proximal duodenum/pylorus) a Whipple procedure can be performed. In case of minimal vascular ingrowth a wedge resection of the portal/mesenteric vein can be performed (33,36);

12. Reconstruction is performed by pancreaticojejunostomy, a hepaticojejunostomy and gastrojejunostomy (5,33);

13. One silicone drain is placed near the pancreaticojejunostomy and/or one near the hepaticojejunostomy; T-drains will not be used;

14. A feeding jejunostomy is not to be used as standard treatment;

15. If resection is not performed due to metastases or local ingrowth biopsies have to be taken.
Palliative treatment should be performed by a hepaticojejunostomy with gastroenterostomy plus a celiac plexus blockade (7,8,33). If a hepaticojejunostomy is not possible a Wallstent should be placed during a postoperative ERCP session.

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# Eligibility criteria

## Inclusion criteria

1. Clinical diagnosis of obstructive jaundice due to a pancreatic head or periampullary tumor;

2. A serum bilirubin level of > 40 µmol/l and < 250 µmol/l at randomization;

3. A spiral CT scan according to standard protocol without metastases or local tumor ingrowth in the portal or mesenteric vessels of >180 degrees;

4. Referred for surgical treatment to one of the participating centers;

5. Time between CT and randomization ≤ 4 days;

6. Informed Consent.

## Exclusion criteria

1. Age > 85 years or severe co-morbidity (Karnofsky <50%) and other contra indications for major surgery;

2. Cholangitis/infection;

3. Previous ERCP and stenting or percutaneous biliary drainage;

4. Previous chemotherapy for this malignancy;

5. Severe gastric outlet obstruction (stenosis duodenum due to tumor growth) defined as vomiting, nausea and/or oral intake less than one l/day.

# Study design

## Design

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| Study type: | Interventional |
| Intervention model: | Parallel |
| Allocation: | Randomized controlled trial |
| Masking: | Open (masking not used) |

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| Control: | Active |

### Recruitment

NL

| | |
|---|---|
| Recruitment status: | Recruitment stopped |
| Start date (anticipated): | 01-11-2003 |
| Enrollment: | 210 |
| Type: | Actual |

## Ethics review

Positive opinion

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| Date: | 06-09-2005 |
| Application type: | First submission |

## Study registrations

### Followed up by the following (possibly more current) registration

No registrations found.

### Other (possibly less up-to-date) registrations in this register

No registrations found.

### In other registers

| Register | ID |
|---|---|
| NTR-new | NL197 |
| NTR-old | NTR234 |
| Other | : N/A |
| ISRCTN | ISRCTN31939699 |

# Study results

**Summary results**

Incidence and management of pancreatic leakage after pancreatoduodenectomy.
de Castro SM, Busch OR, van Gulik TM, Obertop H, Gouma DJ.
Br J Surg. 2005 Sep;92(9):1117-23.
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Delayed massive hemorrhage after pancreatic and biliary surgery: embolization or surgery?
de Castro SM, Kuhlmann KF, Busch OR, van Delden OM, Lameris JS, van Gulik TM, Obertop H, Gouma DJ.
Ann Surg. 2005 Jan;241(1):85-91.
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Recurrent disease after microscopically radical (R0) resection of periampullary adenocarcinoma in patients without adjuvant therapy.
de Castro SM, Kuhlmann KF, van Heek NT, Busch OR, Offerhaus GJ, van Gulik TM, Obertop H, Gouma DJ.
J Gastrointest Surg. 2004 Nov;8(7):775-84; discussion 784.
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Surgical management of neoplasms of the ampulla of Vater: local resection or pancreatoduodenectomy and prognostic factors for survival.
de Castro SM, van Heek NT, Kuhlmann KF, Busch OR, Offerhaus GJ, van Gulik TM, Obertop H, Gouma DJ.
Surgery. 2004 Nov;136(5):994-1002
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Management of bleeding and leakage after pancreatic surgery.
de Castro SM, Busch OR, Gouma DJ.
Best Pract Res Clin Gastroenterol. 2004 Oct;18(5):847-64.