Surgical Treatments in Upper Digestive Bleedings Caused by Esophageal Variceal Efractions – The Value of Azygoportal Disconnection

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For practitioners, the treatment of upper digestive bleeding caused by portal hypertension is a high provocation. The hemorrhage can “kill” the patient, meanwhile the scientific hemorrhage shouldn’t. This is the main reason of my choice to research the basis of this “killer”; trying to perform a useful guide for my fellow colleagues.

Portal hypertension (PTH) is responsible for the more severe and often lethal complications of cirrhosis, such as bleeding esophageal varices, ascites, renal dysfunction and hepatic encephalopathy. Variceal rupture stands for about 30% of all cases of upper digestive hemorrhage, and one third of the cirrhotic patients died after undergoing this complication.

This thesis is structured in two parts: the first part containing 30 pages (25%) with general considerations, and the second part which contains personal contributions of the author, covering 90 pages (75%). The rich iconography is represented by 100 figures, 24 tables, 7 graphics all realised by the author. Finally, the author mentions 153 reference articles (30% published in the last five years).

The **GENERAL PART**, contains the following chapters:

1. The evolution of azygoportal disconnection therapies, in the treatment of esophageal varices, underlying the importance of surgery in this pathology

2. Definition and causes of portal hypertension

3. The consequences of portal hypertension on portal anatomy and surgical implications

4. The pathophysiological support and therapeutic principles of variceal bleeding

5. Therapeutic options - pharmacological therapies, transjugular intrahepatic porto-systemic shunts, non shunting and shunting procedures, hepatic transplantation are reviewed based on our experience and data according to selective international literature

6. Therapeutical algorithms based on the Baveno IV International Consensus, and especially the place of surgery in the secondary prophylaxis.

The **SPECIAL PART**, is composed of the following chapters:

1. Model of experimental portal hypertension, following the histological, damages in the cirrhotic liver caused by common bile duct ligation or intraperitoneal CCl₄ instillation in common type dogs

2. Clinical study covering a 33 years period (1.01.1977-31.12.2009) of portal hypertension surgery in First Clinical Clinic Department in Târgu Mureș
The aim of this section is to formulate an **objective transversal analysis**, based on the clinical findings and the early postoperative evolutions of 510 patients who benefited either conservative (group 1) or surgical (group 2) treatment options.

The **including criteria** where:

- adult cirrhotic patients with PTH, and variceal hemorrhage admitted and treated in First Surgical Clinic between 1.01.1977-31.12.2009.
- at least one upper bleeding digestive episode of confirmed variceal source
- confirmed cirrhotic patients (either viral, toxic or mixed etiology)

The **excluding criteria**:  

- patients under 16 years of age
- other bleeding sources
- patients admitted in other clinics

3. **Azygoportal disconnection techniques** used in our experience:

- detailed operative steps in the modified **Sugiura Futagawa** procedure, key points of the procedure, **Umeyama** and **Skinner** operation applied to selective cases
- **Sengstaken Blakemore** esophageal balloon, used as an **intraoperative endoprothesis**

4. **Discussions**:

- this study is trying to underline the importance and the coerciveness of one surgical technique, best adapted to fit the patient and not the clinical case. Starting from the premise, that none of the procedures is ideal, we still can achieve on the basis of a great experience a series of recommendations. The timing of the operative moment is done in concordance with the bleeding status, while the choosing of the surgical procedure is influenced by 3 factors: clinical status of the patient, hemodynamic status, and experience and competence of the performing surgeon.

5. **Conclusions**:

- the treatment of acute bleeding caused by esophageal varices, must be complex and adapted to each individual case, clinical and experimental studies being justified
- variceal bleeding is the most dramatic complication of cirrhosis, with a high morbidity and mortality rate
- rebleeding risks are higher after azygoportal disconnection, but portal encephalopathy is more frequent after shunting operations
- elective portosystemic shunts have a good postoperative result, but in emergency setting conditions, azygoportal disconnection procedures are more feasible
- the esophageal Sengstaken Blakemore balloon, may be a solution for esophageal fistulae after mechanical transection
- the high rate of mortality after emergency shunts procedures prove to be statically significant in comparison with non shunting procedures
- non shunting operations have a lower mortality rate compared with shunting procedures, especially when applied in emergency settings
- the incidence rate of cirrhosis in our country recommends the establishment of emergency digestive bleeding treatment departments