

Uncontrolled Hypertension as a Risk Factor for Delayed Bleeding after Endoscopic Resection



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Introduction

Colorectal cancer is the third most common cancer in the Czech Republic, affecting 33.7 per 100,000 people. In recent years, endoscopic resection has become the gold standard for diagnostics and therapy within gastrointestinal medicine. The conventional endoscopic mucosal resection provides a good clinical outcome and is minimally invasive. Therefore, it is important to evaluate the risk factors involved in endoscopic resection as major complications include bleeding and perforation. Of these risk factors, there has been little research into the effect of uncontrolled hypertension on post-endoscopic bleeding.

Objective

This study aims to assess uncontrolled hypertension as a risk factor for delayed bleeding after endoscopic resection.

Methodology

This was a retrospective observational small cohort study. From the nearly 300 patients undergoing endoscopic colorectal resection, of which the lesion was larger than 10mm, 12 had delayed bleeding and formed the study group. A group of 23 randomly selected patients from the original list then formed the control group. All endoscopic resections were planned. Therefore, the anticoagulation and antiaggregating therapies were stopped prior to the procedure according to ESGE guidelines. The following clinical data was collected: age, gender, average size of lesion,

history of arterial hypertension, anticoagulation therapy, Hb levels, INR, starting blood pressure, average blood pressure, average starting systolic pressure and average highest systolic pressure. These parameters were chosen in order to provide insight into any other risk factors that could influence our findings. The Fakultni Nemocnice Olomouc patient hospital records and software were used to retrieve the data we required. During the study, delayed bleeding was defined as departure of a larger amount of coagula or enterorrhagia following completed colonoscopy. The exclusion criteria was periprocedural bleeding and departure of a smaller amount of coagula in patients with periprocedural bleeding.

Result

In both the control and bleeding group, there was a difference of 18% between patients presenting with a history of arterial hypertension before the endoscopic resection and those who had no history (see figure 1 and 2). The patients who demonstrated post endoscopic bleeding showed a tendency to have an elevated systolic blood pressure at the beginning of the procedure and have an elevated average systolic blood pressure throughout the procedure. This was 145mmHg vs. 130mmHg seen in the control group, and 155mmHg vs 143mmHg (see figure 3). However, in addition to the increased systolic pressure, there was also a trend between size of lesion and bleeding (see table 1). In general, the bleeding group has larger lesion resections in comparison to the control group.

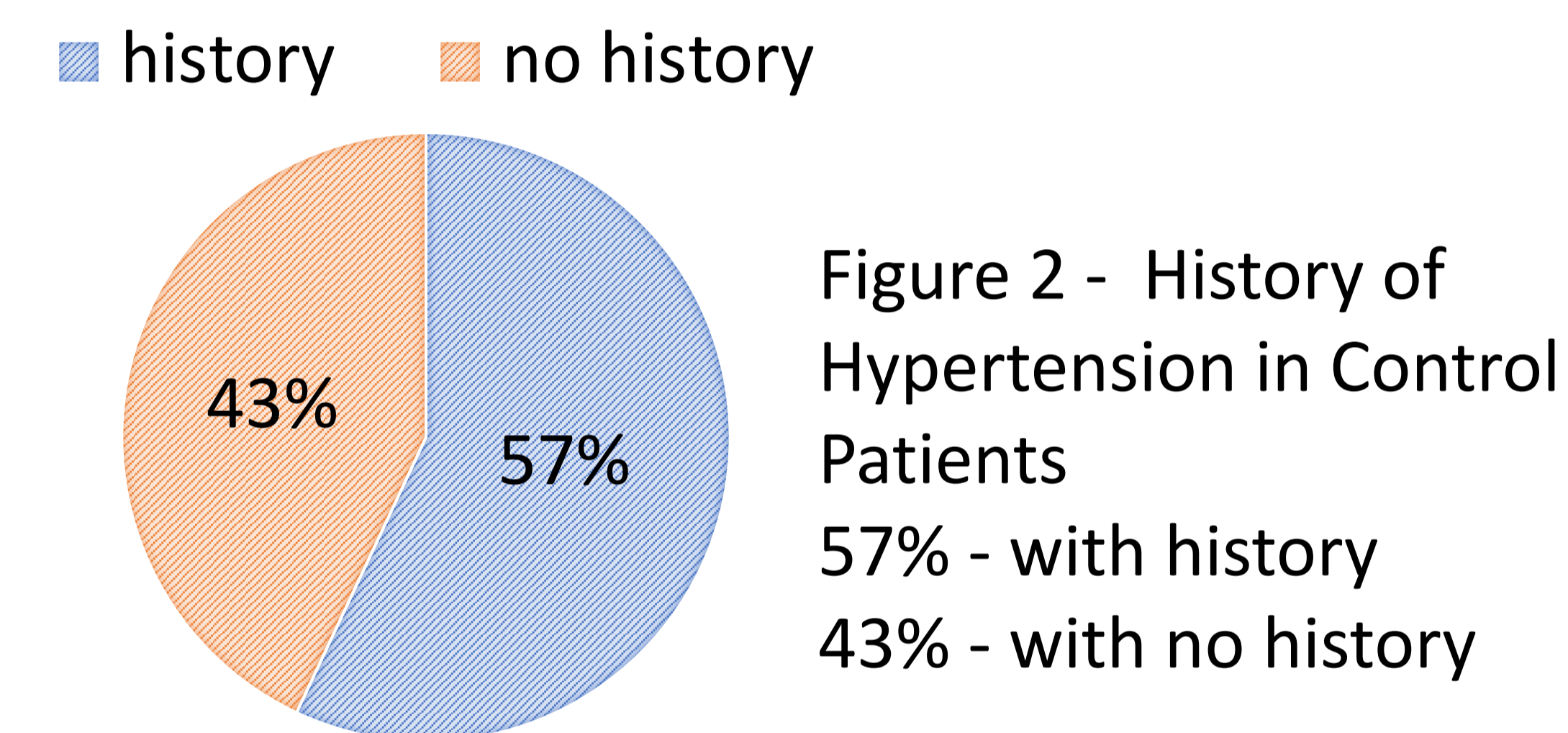
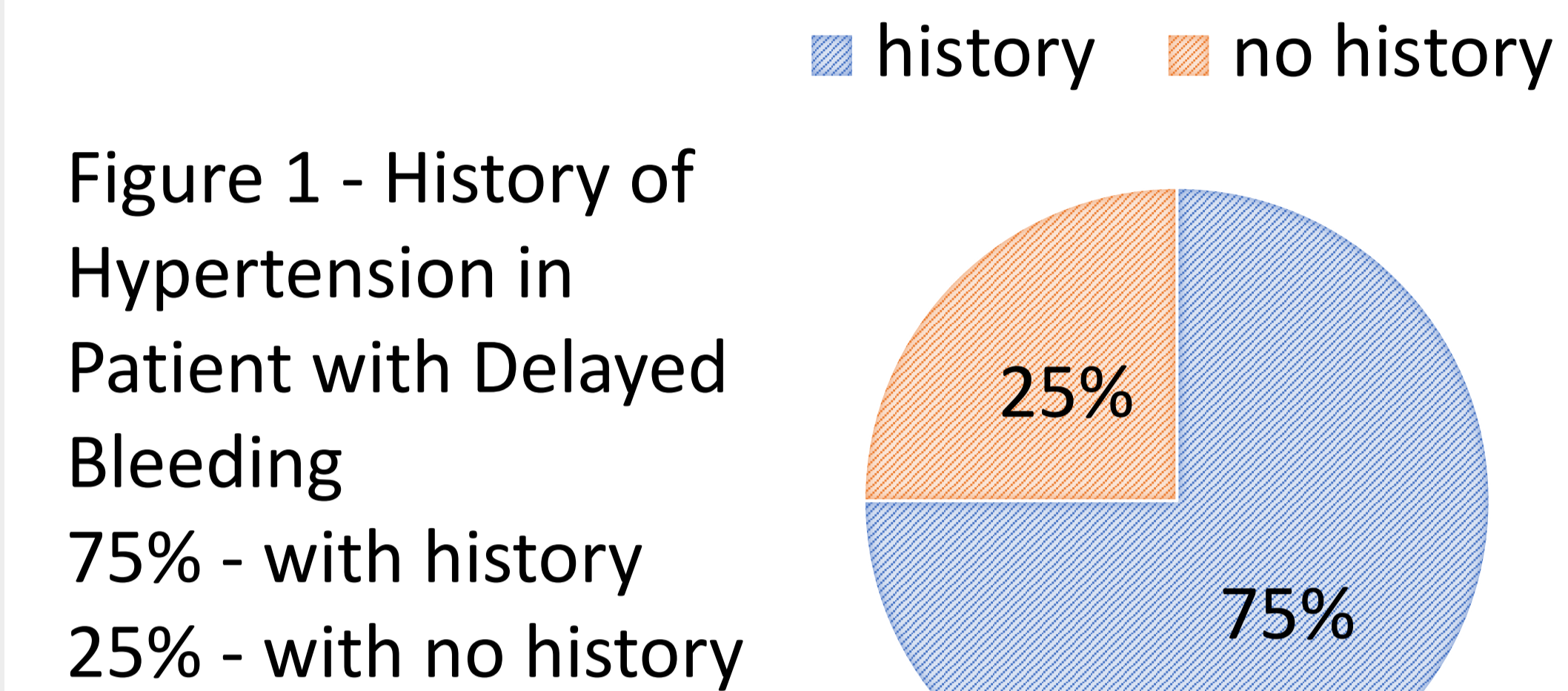
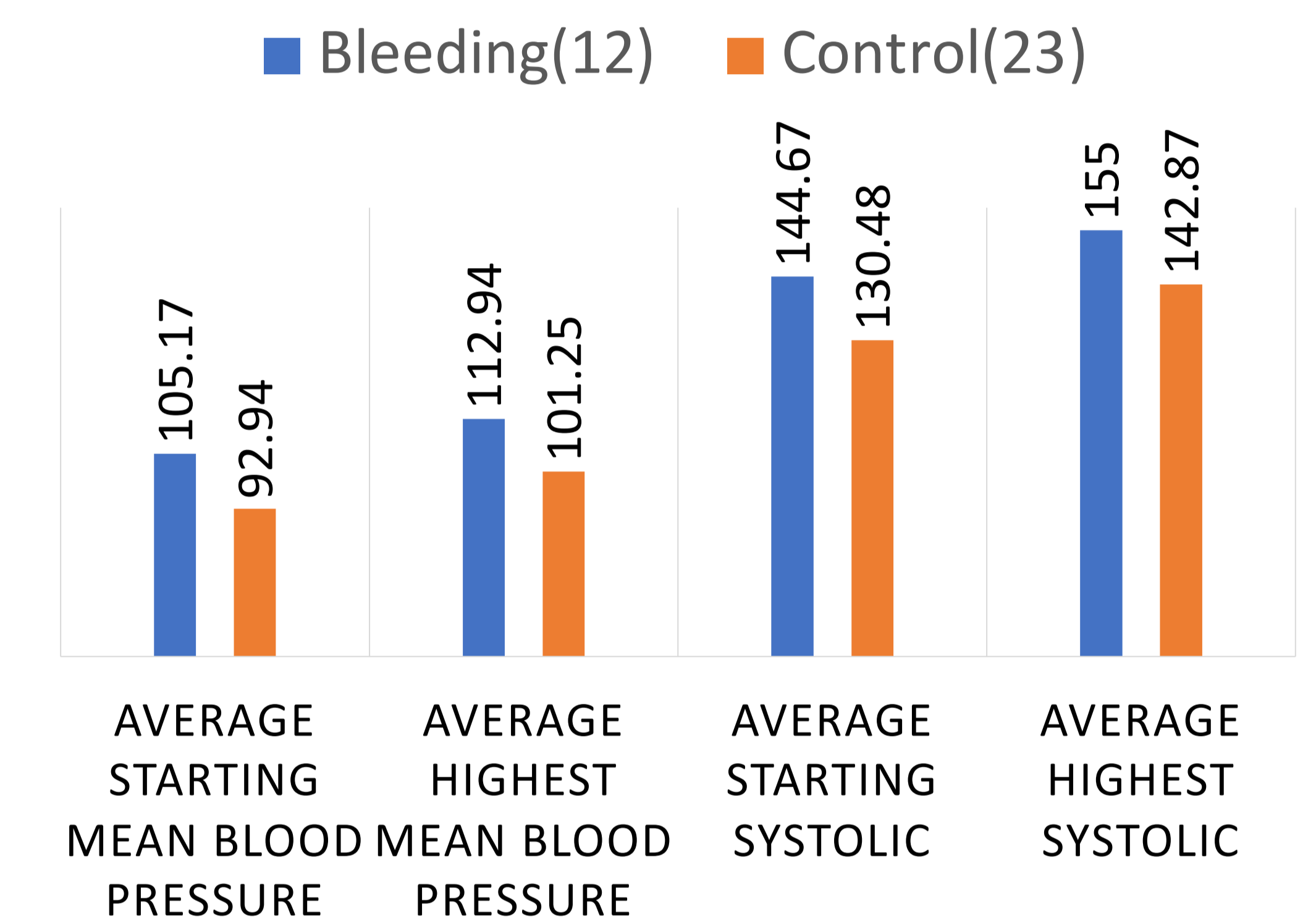


Table 1 - Comparison of Data between Control Group and Delayed Bleeding Group

	Delayed bleeding (12)	Control patient (23)
Females (%)	25	52
Average age	69,08	68,52
Average region size (mm)	38,75	30,87
Anticoagulation therapy (%)	42	22
Average Hb at the start (g/L)	144,09	137,52
Average lowest Hb (g/L)	124,42	128,61

Figure 3. Average Blood Pressure during Endoscopic Procedure [mmHg]



Conclusion

Elevated arterial systolic pressure might be a risk factor in delayed bleeding after endoscopic resection. In addition, the aetiology of post-endoscopic bleeding is multifactorial, including size of lesion. The role of pharmacological history is controversial as it was stopped prior to the procedure. However, further research with larger cohorts should be conducted in order to provide more data on this topic.

Reference

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