Original Article

Role of Adrenaline Sclerotherapy for Controlling Upper GI Bleeding

Adrenaline sclerotherapy

Muhammad Waqas[1], Imdad Ali Ansari[3], Mujtaba Jaffary[4]and Ghias-un-Nabi Tayyab[2]

ABSTRACT

Objectives: To determine the efficacy of adrenaline sclerotherapy to control upper GI bleeding
Study Design: Observational / descriptive study.
Place and Duration of Study: The study was conducted at Gastroenterology/Medical Ward, Lahore General Hospital, Lahore in collaboration with Chandka Medical College Hospital, Larkana from 1st January 2016 to 30th June 2016.
Materials and Methods: In this study a total of 100 cases of either gender between 20-60 years of age with upper GI bleed within last 24 hours were enrolled. The basic demographic data including age, gender, clinical presentation were recorded. Clinical efficacy of adrenaline was considered if there was no further upper GI bleeding upto 72 hour after endoscopy.
Results: The mean age was recorded as 38.41±11.83 years, 57% (n=57) were males and 43% (n=43) were females, efficacy of adrenaline sclerotherapy in controlling upper GI bleeding in was recorded in 66%(n=66) of the cases.
Conclusions: The efficacy of adrenaline sclerotherapy is significantly higher and encouraging for controlling upper GI bleeding and this modality may be used for effective management of upper GI bleeding.
Keywords: Upper GI bleeding, Cancer population, Adrenaline sclerotherapy, Efficacy

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INTRODUCTION

Upper gastrointestinal (GI) bleeding is known as bleeding source proximal to the ligament of Treitz. Various upper GI bleeding cases may cause iron-deficiency anemia but they may not generally present as emergency case. Upper GI bleeding cases are characterized by melena, hematemesis, hematochezia and evidence of compromise for hemodynamic e.g. shock, dizziness and syncope episodes. Usually, they are caused by major haemorrhage from ulcers, Dieulafoy lesions, varices, Mallory-Weiss tears; and neoplasms. These cases are required to be admitted to Intensive Care Unit and urgently a consultant gastroenterologist may be approached. The cases presenting with massive bleeding should be observed for surgery.[1-5] Upper endoscopy is a choice as diagnostic modality while it is also considered as a choice of treatment for acute upper GI bleeding.[6,7]

[1.] Departmentof Medicine / Gastroenterology[2], Lahore General Hospital/Postgraduate Medical Institute, Lahore.
[2.] Department of Medicine, CMC, SMBBU, Larkana
[1.] Department of Medicine, Continental Medical College Lahore

Correspondence:Dr. Muhammad Waqas, [1]Senior Registrar, Department of Medicine Unit-1, Lahore General Hospital/ Postgraduate Medical Institute Lahore.
Contact No: 0321-6660213
Email: drwaqas@live.com

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Being a potentially life-threatening condition, it needs active and appropriate management. Despite of advancement in therapeutic management, the rate of mortality has not changed i.e. 10-14% and relates to the longer life expectancy along with increased number of co-morbidities.[8]

Epinephrine is known as the popular injectate being used for injection therapy and promotes hemostasis by using local tamponade.[9] It arrests around 80% of the bleeding.[10] Initially, it reduces markedly or stops the bleeding but the bleeding may recur more than or equal to 20 minutes after therapy if the residual clot is not already formed as the epinephrine injection is absorbed and flushed into the circulation and however, its local effect, wears off.[11] It is the perfect initial agent as it is an easy to administer and generally reduces the rate of bleeding thereby. It is a common method of achieving hemostasis owing to its low risk, low cost and easy availability but local data is very limited assessing the efficacy of the endoscopic adrenaline use in patients presenting with upper GI bleed. However, the current trial was designed to assess the effectiveness of adrenaline for Upper GI bleeding.

MATERIALS AND METHODS

In this study a total of 100 cases of either gender between 20-60 years of age with upper GI bleed within last 24 hours were enrolled. The study was conducted at Gastroenterology/Medical Ward, Lahore General Hospital, Lahore in collaboration with Chandka Medical College Hospital, Larkana from 1st January 2016 to 30th June 2016. Informed consent of the

patients was obtained to include their data for publication. The basic demographic data including age, gender, clinical presentation were recorded. After a detailed history and physical examination, 5 to 10ml of diluted (1:10,000) adrenaline was injected endoscopically around bleeding point by dedicated gastroenterologist. Clinical efficacy of adrenaline was considered if there was no further UGIB upto 72 hour after endoscopy. The data was analyzed for clinical efficacy by using simple frequency and percentage.

RESULTS

Age distribution of the patients was done showing that 55% (n=55) were between 12-40 years of age while 45% (n=55) were between 41-70 years of age, mean±SD was calculated as 38.74±11.52 years (Table 1). Patients were distributed according to gender, it shows 57% (n=57) were male and 43% (n=43) were females (Table 2). The efficacy of adrenaline sclerotherapy in controlling upper GI bleeding was recorded in 65% (n=65) of the cases (Table 3)

Table No.1: Age distribution (n=100)

Age (years)	No.	%
12 – 40	55	55.0
41 - 70	45	45.0

Table No.2: Gender Distribution (n=100)

Gender	No.	%
Male	57	57.0
Female	43	43.0

Table No.3: Efficacy of adrenaline sclerotherapy in controlling upper GI bleeding (n=100)

Efficacy	No.	%
Yes	65	65.0
No	35	35.0

DISCUSSION

Our data regarding efficacy of adrenaline sclerotherapy for controlling upper GI bleed is in agreement with previous data showing that Argon plasma coagulation (APC), injection sclerotherapy using 1:10,000 adrenaline, endo-clips and heat probe effectively controlled the bleeding in 75.9,[11] 75,[12] 87[13] and 97[14] percent of patients respectively, the findings of these studies support our results. However, some of the above studies showing higher efficacy than ours.

Another study by Chung et al[15] revealed that injection with 1:10000 adrenaline alone reduces active bleeding in majority of the cases, however, rebleed rates was not recorded in his study.' Wardehoff and Gros[16] revealed that injection of the sclerosant polidocanol decreases the risk of rebleed in cases presenting with major stigmata of recent haemorrhage, while the efficacy of sclerosants alone as a management for active bleeding is not well cleared.

A prospective trial including 78 cases with active bleeding or non-bleed visible vessel from a peptic ulcer (PU) who administered with a mean of 16.5 ml of epinephrine, 12 cases (15.4%) had recur bleed.[17]

In absence of no strict criteria regarding the quantity, a total of higher volume[18], about 30 mL[19] may be optimized as hemostasis and associated with reduced rate of rebleeding.[19,20]

However, a second injection is not generally applied considering the fact that it does not confer more advantage over epinephrine injection alone, but it may can potentiate epinephrine-induced mucosal injury.[15,21]

Though we found a higher rate of efficacy of adrenaline sclerotherapy to control upper GI bleed but these findings are primary in our setup and needs some-other trials to validate this data.

CONCLUSION

The efficacy of adrenaline sclerotherapy is significantly higher and encouraging for controlling upper GI bleeding and this modality may be used for effective management of upper GI bleeding.

Conflict of Interest: The study has no conflict of interest to declare by any author.

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