Research Paper Medical Science

Predicting the Outcome of Acute Non Variceal Upper Gastrointestinal Hemorrage Using Clinical Prognostic Factors and Endoscopic Staging.

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ABSTRACT

Objective

Predicting the outcome using the clinical prognostic factors and endoscopic staging to identify patients at risk of adverse outcomes after acute non variceal upper gastro intestinal hemorrhage.

Methods: 100 patients with acute non variceal upper gastrointestinal hemorrhage admittedin Gandhi Hospital were included in the study.The clinical history, physical examination are done and initial risk is evaluated.

Results:Analysis was done using clinical prognostic factors according to clinical Rockall score and Glasgow Blatchford score. In this study out of 100 patients,69(69%) had Rockall score >3 and of these 14(66%) had blood transfusion &5(24%) had rebleeding and as per Glasgow Blatchford score 63(63%) had score <10 and of these 10(16%) had blood transfusion.33 patients scored 10-15 and of these 16(48%) had blood transfusion,4(12%) had rebleeding.4 patients scored 16-20 and all(100%) had blood transfusion, out of these 3(75%) had rebleeding and 1 patient expired.

Conclusion:High Rockall and Blatchford scores in patients with non variceal bleeding associated with increased the length of stay in hospital ,adverse outcomes andthese patients are being more sick.

KEYWORDS

Introduction

Upper GI Bleed is defined as gastrointestinal bleeding from a source proximal to the ligament of treitz.Non variceal bleed is a common emergency with an annual incidence being 50-150/100000 population.Incidence twice common in males as in females and increases with age.The overall mortality is around 10% and may reach 35% in patients with serious co-morbidity.

Patients aged over 80years account for 25% of all upper GI bleed and 33% of hospitalized patients and therefore clinical assessment should analyse prognostic factors as well as possible causes in an attempt to provide management.Though upper GI endoscopy remains the cornerstone ,the recent angiographic studies permit the demonstration of small vessel abnormalities and therapeutic embolization to stop bleeding.

Clinical approach, diagnosis &management of UGI bleed depends on the extent facilties &expertise available locally.Early prognostication of a patient by a clinician can enable for predicting the outcome &also for prompt and vigorous resuscitation.

Material and Methods

100 patients admitted with acute non variceal Upper GI Bleed in Gandhi Hospital Secunderabad during the period 2012-2014 were included in the study.

All patients with variceal bleeding are excluded from the study.Clinical history, physical examination findings including vitals are recorded and initial risk is evaluated.Age, sex,hemodynamic stability and associated comorbid conditions are considered.

CBP,Blood grouping ,typingand other relevant investigations which include serum creatine ,serum electrolytes,UpperGI endoscopy ,liver function tests are sent

.Ryles tube aspiration with normal saline till gastric contents are clear,volume expanders with 25% dextrose,blood transfusion in needy patients and proton pump inhibitors[1 ,2] are given.

Rockall scoring system

variable	0	1	2	3
Age(years)	<60yr	60-79yr	>80yr	
shock	No shock	tachycardia	hypotension	
Systolic BP(mm of Hg)	>100	>100	<100	
Pulse rate	<100	>100	>100	
Co-morbidity	Nil		Cardiac failure,IHD,other major comorbidity.	
Diagnosis	Mallory Weiss tear,without SRH,no lesion	All other diagnosis	Malignancy of upper GIT	
Stigmata of recent bleed(SRH	None or dark spots		Blood in UGIT. Adherent clot,visible or spurting vessel	

Glasgow-Blatchford Score

	Admission risk marker [	Score component value
	Blood Urea Nitrogen	
>6.5 <8.0		2
>8.0 <10.0		3

>10.0	<25.0		4
>25			16
		Haemoglobin (g/L) for men	
>12.0	<13.0		1
>10.0	<12.0		3
<10.0		16	

	Haemoglobin (g/L) for women
1>10.0 <12.0	1
1<10.0	16
	Systolic blood pressure (mm Hg)
1100-109	1
90-99	2
<90	3

Pulse ≥100 (per min)	1
Presentation with malena	1
Presentation with syncope	2
Hepatic disease	2
Cardiac failure	2

In the validation group, scores of 6 or more were associated with a greater than 50% risk of needing an intervention.

Observations

Age Distribution:<60 years-72%,60-79years-22%,>-80years-6%

Sex:72% are males ,22% are females.

In this study of 100 patients on UGI endoscopy[2,3,4,5] 35 patients had peptic ulcers, 39 patients had erosions,6 patients had Mallory Weiss syndrome,15 had normal findings and 5 had other lesions.In allcauses males are more effected.

With regard to relationship of Rockall score to patient outcome,11patients scored 0,1(9%)patient had blood transfusion.31 patients scored 1 &among them 6(19%) had blood transfusion.26 patients scored 2 and among them 7(26%) had blood transfusion.11 patients scored 3, among them 2(18%) had blood transfusion.Patients with Rockall scores 0,1,2,3 did not have rebleeding.12 patientsscored 4, among them 6(50%) had blood transfusion and 2(7%) had rebleeding.5 patients scored5, among them 4(80%) had blood transfusion and 2(40%) had rebleeding.2 patients scored 6 ,and among them 2(100%) had blood transfusion and 1(50%) had rebleeding.No mortality in patients with Rockall scores 1to 6.Two patients scored 7, among them 2(100%) had blood transfusion,2(100%)had rebleedingand 1(50%)patient expired.

With regard to Blatchford score relationship to patient outcome,7 patients had score 0-5,among them 1(14%) had blood transfusion.56 patients had score 6-10,among them 9(16%)patients had blood transfusion.Patients with score 0-10 did not have rebleeding and theris no mortality.33 patients had score 11-15,among them 16(48%) had transfusion,4(12%) had rebleeding&there is no mortality.4 patients had score 16-20,among them 4(100%)had transfusion,3(75%)patients had rebleeding and 1(25%)patient expired

AGE GROUP	% OF CASES
<60 years(Group-1)	72
60-79 years(Group-2)	22
>80 years(Group-3)	6
Total	100

Relationship of Rockall Scores To Patient Outcome In Terms Of Transfusion,Rebleeding&Mortality

Clinical Rockall Score	Patients n(%of total)	Taking Aspirin Or NSAIDS	Transfusion	Rebleeding	Mortality
0	11	4(36)	1(9)	0(0)	0(0)
1	31	13(42)	6(19)	0(0)	0(0)
2	26	9(34)	7(26)	0(0)	0(0)
3	11	3(27)	2(18)	0(0)	0(0)
4	12	4(33)	6(50)	2(17)	0(0)
5	5	3(60)	4(80)	2(40)	0(0)
6	2	0(0)	2(100)	1(50)	0(0)
7	2	(0)	2(100)	2(100)	1(50)

Relationship Of Clinical Blatchford Score To Patient Outcome

Blatchford Score	Patients n(% of patients)	Taking Aspirin Or NSAIDS	Transfusion	Rebleeding	Mortality
0-5	7	3(43)	1(14)	0(0)	0(0)
6-10	56	23(41)	9(16)	0(0)	0(0)
11-15	33	10(30)	16(48)	4(12)	0(0)
16-20	4	1(33)	4(100)	3(75)	1(25)

Discussion

In the present study outcome was assessed in100 patients with non variceal upper GI bleeding.Clinical parameters, lab parameters, endoscopic findings[6,7] were used and Rockall&-Blatchford scores were calculated for each patientto predict outcome inorder to triage for appropriate care.

Low Rockall[8,9] and Blatchford scores with non variceal bleeding were associated with low adverse outcomes.Rockall etal[] defined risk factors comprising increasing age,comorbidity,shock,endoscopic findings[8,9].The total score less than 3 is associated with an excellent prognosis while a score greater than 8 is associated with high risk of death.Rockall [5,6]score is more accurate than other clinical scores.In this study out of 100 patients 79 patients are in the score range of 0-3 and among them 17 patients had blood transfusion&none among them had rebleeding.12 patients scored 4 and among them 6 had blood transfusion and 2had rebleeding.2 patients scored6 and1 patient had rebleeding.2 patients scored7 and among

then 2 had rebleeding and 1 patient expired.

Glasgow Blatchford score[10] assesses the risk of mortality in patients with UGI bleed and has advantages over Rockall score which include lack of subjective variables(e.g.severity of systemic diseases)and the lack of need for oesophagogastroduodenoscopy to complete the score.In a study published in Lancet on January, 2009, patients with UGI bleed with Blatchford score of 0 is considered low.

In this study 7 patients had a Blatchford score 0-5,56 patients scored between 6-10,33 patients are in a score of 11-15 and 4 patients scored 16-20.Patients in score range of 0-10 did not have bleeding and no mortality

In this study length of stay in hospital increased with higher clinical scores[11] as this group of patients are more sick with more comorbid diseasesand 1 patient expired as his hemoglobin level is low and was suffering from acute on chronic pancreatitis.7 patients had rebleeding and all these patients had Rockall score of more than 4 and Blatchford score between 11-20.Thus we can rapidly assess the patients with UGI bleed using these prognostic scores in order to triage patients for appropriate care.

Conclusions

Non variceal UGI bleed is a significant cause of morbidity and mortality.Patients at high risk can be identified by risk assessment scoring systems which include clinical &endoscopic variables.

Low Rockall and Blatchford scores with non variceal bleeds are associated with less adverse outcomes.(Blood transfusion,Rebleeding,Mortality) and as the scores increases the outcome becomes worse.

In this study the length of hospital stay increased with increased scores.

UGI bleed patients can be rapidly assessed using these prognostic scores in order to triage for appropriate care.

REFERENCES

1.Khuroo MS, Yattoo GN,Javid G.A comparison of omeprazole and placebo for bleeding peptic ulcer.N Engl J Med 1997;336:1054-8. | 2.Barkun A, Bardou M,Marshall JK.Consensus recommendations for managing patients with nonvariceal upper gastrointestinal bleeding.Ann Intern Med 2003;139(10): 843-57. | 3.Forrest JA,Finalyson ND, Shearman DJ.Endoscopy in gastrointestinal bleeding.Lancet 1974;ii:394-97 | 4.Gralnek IM, Dulai GS.Incremental value of upper endoscopy for triage of patients with acute non-variceal upper-GI hemorrhage.Gastrointest Endosc 2004;60(1):9-14. | 5.Cook DJ, Gayatt GH, Salena BJ, et al.Endoscopic therapy for acute non-variceal haemorrhage:a meta analysis.Gastroenterology 1992:102:139-48. | 6.Mondardini A,Barletti C, Rocca G, Garripoli A, Sambataro A, Perotto C, et al.Non-variceal upper gastrointestinal bleeding and Forrest's classification:diagnostic agreement between endoscopists from the same area.Endoscopy 1998;30(6):508-12. | 7.Savides TJ, Jensen DM.Therapeutic endoscopy for non variceal gastrointestinal bleeding.Gastrointest Clin North Am 2000;29:465-87. | 8.Rockall TA,Logan RF,Devlin HB,Northfield TC.Incidence of and mortality from acute upper gastrointestinal haemorrhage in the United Kingdom.Steering Committee and members of the National Audit Of Acute Upper Gastrointestinal Haemorrhage.BMJ 1995;311(6999):222-6. | 9.Rockall TA,Logan RF,Devlin HB,Northfield TC.Risk assessment after acute upper gastrointestinal haemorrhage.Gut1996;38(3): 316-21. | 10.Blatchford O,Murray WR,Blatchford M.A risk score to predict need for treatment for upper gastrointestinal bleeding.Lancet 2000;356:1318-21. | 11.Hay JA,Maldonado L, Weingarten SR,Ellrodt AG.Prospective evaluation of a clinical guideline recommending hospital length of stay in upper gastrointestinal tract hemorrhage,JAMA 1997;278(24):2151-6.