

Case Report



Mallory Weiss Tear: A Case Report

P. Salome Satyavani*, P.Soujanya¹, Pragnya Dutt.K¹

*Assistant professor, 1V- Pharm.D, Department of Pharmacy Practice,
Pulla Reddy Institute of Pharmacy, Domadugu (V), Gummadidala (M) Sanga reddy (Dt), Telangana, India- 52313.

*Corresponding author's E-mail: pssalom@gmail.com

Received: 08-01-2020; Revised: 22-02-2020; Accepted: 28-02-2020.

ABSTRACT

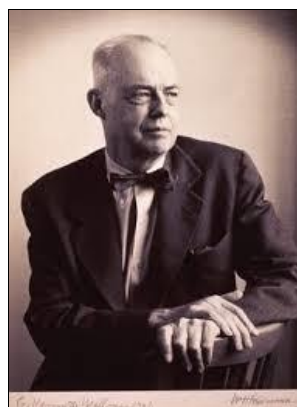
Mallory Weiss Syndrome is characterized by longitudinal superficial mucosal membrane damage or tear where esophagus and the stomach are connected. MWS symptoms include Abdominal pain, Hematemesis (Blood vomiting), frequent belching, nausea, heartburn, throat soreness, general weakness with dizziness, diarrhea. It is mostly caused by violent coughing and vomiting, chronic alcohol consumption, in some food poisoning cases. Diagnosis of MWS is Endoscopy, Stool test to check with any blood. In this study the patient was presented with hematemesis and abdominal pain in right hypochondriasis, and was a chronic alcoholic. Patient was treated with IV fluids, antibiotics, antacids, and other supportive care. Patient was stable before discharge.

Keywords: Mallory Weiss Syndrome, Hematemesis, Endoscopy, Chronic Alcoholism, Antacids.

INTRODUCTION

Mallory Weiss Syndrome (MWS) or tear occurs in the gastro esophageal junction with longitudinal, Non perforating superficial lacerations and are mostly seen in Upper Gastrointestinal Bleeding conditions^{1,2}. Mallory Weiss syndrome was first identified by George Kenneth Mallory (1900-1986), who was born in Boston and he was professor in Boston university and Soma Weiss (1898-1941), born in Bestereze, Hungary and worked as a chief physician at Peter Bent Brigham hospital. They described regarding MWS in their brief report "Hemorrhage from laceration of the cardiac orifice of the stomach due to vomiting" in American journal of medical science 1929; 178:506³. Males are 2 to 4% more prone to this syndrome than women and MWS cases are high in 40-60 age people. In US 1 to 15% of Mallory tear in adults occurs due to upper gastro intestine bleeding⁴. The common bleeding parts are duodenum or stomach⁸. Predisposing factors of MWS comprise chronic alcoholism, hital hernia, gastric mucosa inflammatory disease⁵, forceful emesis, retching⁶, cough and straining at defecation and peptic ulcers⁸. The main symptoms include hematemesis (blood vomiting), chest pain, dyspnea, epigastric pain, abdominal pain, gastrointestinal bleeding in few cases, and malena⁷. There are few mechanisms of MWS those are (1) obstruction of gastric pylorus which increases intragastric pressure this causes urge to vomit. (2) Mild or decrease motility between mucosa and sub mucosa⁹. (3) Loss of collagen fibers in mucosal membrane. (4) Age of the person decreases the elasticity and motility of mucosa and GIT⁸. (5) Herniation of cardiac through diaphragm¹⁰. Mallory Weiss syndrome is diagnosed by endoscopy, radiology (chest X rays)¹³ and examination of blood in stool but in few patients Mallory Weiss tear was recognized as a complication of upper endoscopy which is also called as iatrogenic Mallory Weiss tear¹¹. Diagnosis of

MWT through endoscopy in the patients who suffer from chest pain, vomiting or hematemesis is difficult because the body considers the endoscopic equipment as a foreign particle and the patient may have an urge to vomit¹². Most of the patients with MWS hemorrhage are treated pharmacologically with intravenous antiemetics, antacids and non pharmacological treatment includes sedation, fasting, blood transfusion¹³. Patients with active bleeding and co morbid diseases need immediate haemostatic and the best treatment is interventional endoscopy, some other patients require combination treatment like epinephrine or vasopressin injection, band ligation, electro coagulation and hemoclip therapy¹⁴.



G.K Mallory



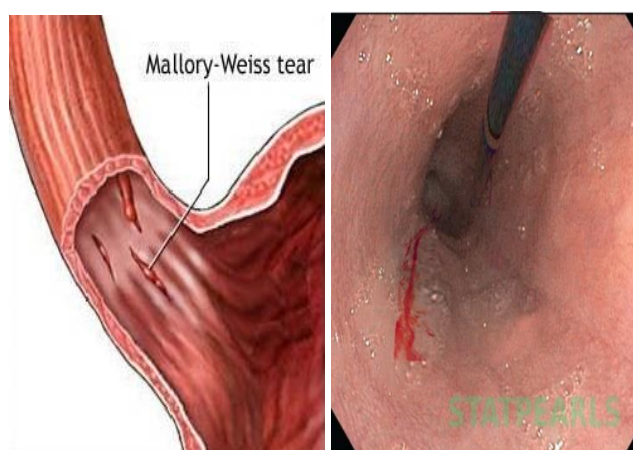
Soma Weiss

CASE STUDY

A male patient of age 43 years came with complaints of 10 episodes of hematemesis since yesterday evening. Last episode at 6:30 am in the morning associated with history of abdominal pain more in right hypochondriasis and was admitted in hospital for further management. Patient was conscious and coherent on examination and vitals of the patient were Temperature 98.6°F, BP: 150/100mm/Hg,



RR: 20/min, PR: 111bpm, SPO2: 98% at RA, CVS: S1S2+, Lungs: BAE+, P/A: Soft. Lab Investigations- **Complete Blood Picture:** Hemoglobin: 15.4 gm%, Red Blood Cells: 4.7 m/UL, WBC: 10.8 Thousands/cumm, Platelet count: 151 Thousands/cumm, neutrophils: 75%, lymphocytes: 20%, eosinophils: 1%, monocytes: 4%, basophils: 0%, PCV: 44.5%, MCV: 93.1 fl, MCH: 32.2 pg, MCHC: 34.6%, ESR 1st and 2nd hour: 42 mm/hr and 86 mm/hr, **Liver Function Test:** Total Bilirubin: 1.8 mg/dl, Direct Bilirubin: 0.6 mg/dl, SGOT: 71 IU/L, SGPT: 51 IU/L, Serum Alkaline Phosphatase: 101 IU/L, Total Protein: 7.5 gm/dl, Serum Albumin: 4.6 gm/dl, Globulin: 2.9, Random Blood Sugars: 138 mg/dl, Serum Urea: 61 mg/dl, Serum Creatinine: 0.8 mg/dl, Serum Sodium: 135 mmol/L, Serum Potassium: 4 mmol/L, Serum Chloride: 97 mmol/L, **Complete Urine Examination:** Colour: Pale Yellow, Volume: 20 ml, Reaction: Acidic, Pus cells: 3-5 HPF, Epithelial cells: 2-3 HPF. RADIOLOGY Chest X Ray: Normal study, SONOLOGY Ultrasound Abdomen: Grade I Fatty Liver, ENDOSCOPY: Erosive gastro duodenitis Mallory Weiss tear



Mallory tear

Bleeding of esophagus

DISCUSSION

Patient was admitted in hospital due to 10 episodes of hematemesis and was having abdominal pain more in right hypochondrias. He was having a social history of chronic alcoholism. Patient was admitted in hospital due to further management of complication. On the first day of admission nothing was given by mouth. Physician advised laboratory tests of complete blood picture, Liver function tests, Complete Urine Examination, Chest X Ray, Abdominal Ultrasound. Patient has undergone with endoscopy procedure and results stated that erosive gastro duodenitis or Mallory Weiss tear. On the first day patient was treated only through intravenous route with Monocef (Ceftriaxone) 1 gm BD, Pan (Pantoprazole) 40 mg OD, Zofer (Ondansetron) 4 mg TID, Intravenous fluids (Dextrose and Ringer lactate in normal saline). On the second day patient was complaining regarding insomnia due to severe cough and nausea. On observation patient was restless and dehydrated. The same treatment was continued, syrup Grilinctus BM (Terbutaline, bromhexine) 10 ml per oral TID and tablet Librium (Chlordiazepoxide) 25 mg BD were added. On the third day, there were no specific complaints,

anxiety and restlessness were decreased, cough persisted and there was no episode of hematemesis. Physician advised to continue the same treatment. Due to the treatment the patient was stable and had no further complaints. On the fourth day he was discharged with tablet Sompraz (Esomeprazole) 40 mg OD for 1 month, Syrup Sucral (Sucralfate) 10 ml TID for 15 days, tablet Zofer (Ondansetron) 4 mg TID for 5 days, tablet Librium (Chlordiazepoxide) 25 mg OD for 5 days, tablet Benfomet Plus (Benfotiamine, Mecobalamin, Alpha-Lipoic acid, Pyridoxine) OD for 3 days. The patient and his attendees were counseled about the further management; patient was asked to stop alcohol and warned about medication adherence.

CONCLUSION

Patient was diagnosed with Mallory Weiss Tear due to erosive gastro duodenitis. He was having a social history of chronic alcoholism; before the hospital admission patient had 10 episodes of hematemesis and abdominal pain in right hypochondriac region. One of the major reasons of Mallory Weiss condition in this patient is due to excess consumption of alcohol, this lead to hematemesis and esophageal tear. However endoscopy was done, abdominal ultrasound report shows Grade I fatty liver. Patient was further treated with antiemetics, antacids, cough suppressants, antibiotics and multivitamins. Mallory Weiss tear always arises due to continuous vomiting, blood vomiting and is common in chronic alcoholics. If this condition is not treated immediately it leads to fatality.

REFERENCES

1. Overview of Mallory-Weiss syndrome, Kathleen Rich PhD, RN, CCNS, CCRN-CSC, CNN, Journal of vascular nursing, Volume 36, Issue 2, June 2018, Pages 91-93, <https://doi.org/10.1016/j.jvn.2018.04.001>
2. Mallory, G.K., Weiss, S. Hemorrhages from lacerations of the cardiac orifice of the stomach due to vomiting. *Amer. J. Med. Sci.* 1929, 178, 506
3. Mallory and Weiss of the Mallory-Weiss Syndrome, William S. Haubrich, M.D. Volume 121, Issue 3, September 2001 Page 541. DOI: [https://doi.org/10.1016/S0016-5085\(01\)70152-7](https://doi.org/10.1016/S0016-5085(01)70152-7).
4. Mallory Weiss Syndrome, Prashanth Rawla; Joe Devasahayam. *Sovah Health*, Martinsville, VA University of South Dakota Last Update: November 24, 2019.
5. Dagradi, A.E., Broderick, J.T., Juler, G. *et al.* The Mallory-Weiss syndrome and lesion. *Digest Dis Sci* 11, 1966, 710–721. <https://doi.org/10.1007/BF02239424>
6. Wei Chen, Xiao-Nan Zhu, Jin Wang, Lin-Lin Zhu, Tao Gan, Jin-Lin Yang. Risk factors for Mallory-Weiss Tear during endoscopic submucosal dissection of superficial esophageal neoplasms. *World J Gastroenterol.* Sep 14, 2019, 25(34), 5174-5184 doi: [10.3748/wjg.v25.i34.5174](https://doi.org/10.3748/wjg.v25.i34.5174)
7. Cucci, Maria MD; Caputo, Fiorella MD; Fraternali Orcioni, Giulio MD; Roncallo, Anna MD; Ventura, Francesco MD, PhD, Transition of a Mallory-Weiss syndrome to a Boerhaave syndrome confirmed by anamnestic, necroscopic, and

- autopsy data A case report *Medicine*: December 2018 - Volume 97 - Issue 49 - p e13191 doi: 10.1097/MD.00000000000013191
8. Miroshnikov BI, Rasskazov AK. [Mallory-Weiss syndrome]. Methodological recommendations. Saint Peterburg; 1994. p. 82.
 9. Cherednikov EF, Kunin AA, Cherednikov EE, Moiseeva NS. The role of etiopathogenetic aspects in prediction and prevention of discontinuous-hemorrhagic (Mallory-Weiss) syndrome. *EPMA J.* 7(1), 2016, 7. Published 2016 Mar 20. doi:10.1186/s13167-016-0056-4
 10. Maule WF. Nausea and Vomiting. In: Walker HK, Hall WD, Hurst JW, editors. *Clinical Methods: The History, Physical, and Laboratory Examinations*. 3rd edition. Boston: Butterworths; 1990. Chapter 84. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK410/>
 11. Shin Na, Ji Yong Ahn, Kee Wook Jung, Jeong Hoon Lee, Do Hoon Kim, Kee Don Choi, Ho June Song, Gin Hyug Lee, Hwoon-Yong Jung, and Seungbong Han. Risk Factors for an Iatrogenic Mallory-Weiss Tear Requiring Bleeding Control during a Screening Upper Endoscopy, Volume 2017 | Article ID 5454791 | 6 pages | <https://doi.org/10.1155/2017/5454791>
 12. Steadman C, Kerlin P, Crimmins F, et al. Spontaneous intramural rupture of the oesophagus. *Gut.* 31(8), 1990, 845–849. doi:10.1136/gut.31.8.845
 13. Kim JW, Shim CS, Lee TY, Cheon YK. Mallory-Weiss Tear during Esophagogastroduodenoscopy. *Case Rep Gastroenterol.* 9(1), 2015, 62–67. Published 2015 Feb 28. doi:10.1159/000380879
 14. S. Leclaire, M. Antonietti, I. Iwanicki-Caron, A. Duclos, S. Ramirez, E. Ben-Soussan, S. Hervé, P. Ducrotté. Endoscopic band ligation could decrease recurrent bleeding in Mallory–Weiss syndrome as compared to haemostasis by hemoclips plus epinephrine First published: 20 July 2009 <https://doi.org/10.1111/j.1365-2036.2009.04051.x>

Source of Support: Nil, Conflict of Interest: None.