Mallory-Weiss Syndrome

A Changing Clinical Picture

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A retrospective study of 18 episodes of upper gastrointestinal (UGI) bleeding secondary to Mallory-Weiss syndrome occurring in 16 patients is presented. Reported cases published since 1969 have been summarized and compared with earlier collected series. It is evident that the clinical spectrum, prognosis, and opinion regarding etiology and treatment of the syndrome have changed in the last decade. Increased awareness of gastroesophageal lacerations secondary to emesis as well as other causes of significantly increased intraesophagogastric pressures, and widespread utilization of fiberoptic endoscopy have resulted in identification of Mallory-Weiss syndrome with increasing frequency. Less severe lacerations which are healing with medical therapy are being recognized. It is recommended that endoscopy be performed in all cases of UGI hemorrhage and that patients with Mallory-Weiss syndrome be managed medically unless hemorrhage is massive or persistent since nearly three of four patients can be successfully treated without operation.

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UPPER GASTROINTESTINAL (UGI) hemorrhage secondary to mucosal tears at or near the cardioesophageal junction has received increasing attention in recent years and the overall morbidity and mortality of the condition appears to have diminished. Increased utilization of fiberoptic endoscopy has resulted in more frequent diagnosis of the syndrome and consequently milder forms have been identified. Initial description of post-emetic lacerations was presented by Mallory and Weiss[8] in 1929. Prior to endoscopic diagnosis of the syndrome by Hardy,[5] all reported cases were diagnosed either at surgery or postmortem examination. At present, cases of upper gastrointestinal hemorrhage not sufficiently severe to warrant operative intervention are being endoscopically recognized as being due to Mallory-Weiss syndrome. It is now apparent that the severity of the clinical spectrum can range from bleeding without the need for transfusion to massive hemorrhage requiring emergency operation. A retrospective analysis of cases of Mallory-Weiss syndrome was undertaken to determine if the experience at our medical center coincided with the trend toward more frequent medical treatment of this condition which has recently been reported.[9,11,13,15,16]

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Materials

The records of patients with upper gastrointestinal hemorrhage secondary to endoscopically or surgically documented Mallory-Weiss syndrome at Columbia-Presbyterian Medical Center were reviewed for the period 1968–1975. There were 18 documented instances of emetogenic laceration of the gastric or esophageal mucosa occurring in 16 patients during this period.

Results

The patients ranged in age from 26 to 68 years. Nine of the 16 were male. A history of chronic heavy alcohol consumption was obtained from 14/16 patients with 8 reporting excessive consumption just prior to the onset of hematemesis. A history of retching and regurgitation of food or clear material prior to the onset of hematemesis was obtained in 13/18 bleeding episodes—the remainder vomited blood initially. Painless hematemesis was reported in 17/18. The diagnosis was made endoscopically in 16/17 instances—in one case subsequently shown at operation to have a gastric mucosal laceration, the endoscopist reported a normal esophagus but was unable to adequately visualize the gastric mucosa because of excessive blood. In one case, endoscopy was not performed. There were no deaths among the patients treated medically (Table 1). The average hospital stay was

TABLE 1. *Patients with Mallory-Weiss Syndrome admitted to Columbia-Presbyterian Medical Center (1968–1975).*

	Patients	Average Transfusion (Units)	Follow-up-Months Average (Range)	Recurrence	Mortality
Non-operative	10	3.6	32 (12–66)	1	0
Operated	6	5.8*	49 (15–92)	1	1

* Transfusion before surgery.

9 days and the average transfusion requirement was 3.6 units with the range from no transfusion in three patients to 8 units in two patients. Operation was performed in 6/18 bleeding episodes. Among the surgically treated cases, there was one death from hepatic failure 16 days after oversewing both a gastric mucosal tear and a bleeding varix in a 62 year old male with hepatic cirrhosis. The average hospital stay of the remaining five operated cases was 10 days—one case required reoperation four days after the initial procedure because of bleeding from the gastrotomy site. There were two documented recurrences of Mallory-Weiss syndrome in this series occurring one month and 32 months respectively following the first episode. The latter case had been treated surgically at the time of the first occurrence. Neither of the recurrent bleeding episodes required operation. Another patient who had been treated surgically returned 6 months later with UGI hemorrhage. The patient refused gastroscopy, the UGI series was negative and the patient was stabilized after transfusion of three units.

Discussion

Collective reviews of reported cases of Mallory-Weiss syndrome were published in 1966 and 1969 by Holmes[6] and Weaver[17] respectively. Our review of the literature since 1969 disclosed a total of 139 reported cases (including this series).[2,9,10–13,15,16,19] Comparison of the most recently reported cases with those reviewed in earlier collected series is interesting with regard to both treatment and prognosis (Table 2). Whereas 52% of the first 121 cases reported were treated surgically, only 28% of the more recently diagnosed cases have required operation. In our series, 6/18 bleeding episodes were treated surgically; in retrospect, it seems that operation might possibly have been avoided in two patients if medical management had continued. Seventy-two per cent of the most recently reported cases of endoscopically documented Mallory-Weiss syndrome have been treated conservatively with a 97% survival. Of those patients requiring operation, the most recent information indicates a 95% survival compared with an 81% survival of cases reported prior to 1966.

The changing clinical picture of Mallory-Weiss syndrome would seem to be secondary to widespread utilization of fiberoptic endoscopy. Lacerations of the gastroesophageal mucosa are being diagnosed with increased frequency and less serious forms are being recognized. This is reflected in the greater percentage of patients with Mallory-Weiss syndrome that are being treated conservatively now as compared to the era prior to fiberoptic endoscopy. Lacerations of the mucosa are rarely diagnosed on the basis of UGI series.[3,14] It is likely that many patients with Mallory-Weiss syndrome who presented with mild, self-limited UGI bleeding and had negative UGI barium examinations were diagnosed as having gastritis before endoscopic examination became routine.

Increased survival of patients treated medically reflects improved management of UGI bleeding in general. Surgical mortality has declined because surgeons are more aware of the condition and because of the ability of the endoscopists to make a preoperative diagnosis.

Excessive alcohol consumption and vomiting were previously considered to be essential factors in the etiology of the classical Mallory-Weiss syndrome. Zikria et al.[20] proposed the term "emetogenic" to emphasize the etiology of the mucosal injury. It now seems apparent however, that the development of high intra-esophagogastric pressures[1] by whatever means can result in laceration. While the majority of lacerations are due to vomiting (all in our series), tears secondary to external cardiac massage,[7] coughing, straining at stool, heavy lifting, hiccuping under anesthesia[4] and blunt abdominal trauma[11] have been described. Similarly, excessive alcohol intake is not necessarily a part of the clinical picture. In the collected series reported by Weaver,[17] only 60% of emetogenic lacerations were associated with an alcoholic episode. There were two recurrences of the syndrome in our series. Neither episode required operative intervention. Surprisingly, there are only four other reported documented recurrences of Mallory-Weiss syndrome in the literature.[9,13,18]

TABLE 2. *Collected series of Mallory-Weiss Syndrome from the medical literature (1929–1975).*

Period	Number of Cases	% Operated (% Survival)	% Non-operative (% Survival)
1929–1966[6]	121	52% (81%)	48% (38%)
1966–1969[17]	108	47% (90%)	53% (86%)
1969–1975[2,9,10–13,15,16,19]	139	28% (95%)	72% (97%)

In managing patients with Mallory-Weiss syndrome it should be emphasized that diagnosis of this entity is not an indication for immediate operation as it is in cases of emetogenic rupture of the esophagus. However, one should not be lulled into complacency because of the 72% incidence of spontaneous cessation of bleeding and eventual healing of the esophagogastric lacerations.

Criteria for operative intervention should be guided by those which are applied to UGI hemorrhage in general. Medical management, similarly is no different than for other sources of UGI bleeding.

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