

Is blood transfusion a predictor for surgery or hysterectomy in patients admitted from the emergency room for abnormal uterine bleeding?

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Background

It is perceived that patient often have multiple emergency room visits, admissions and transfusions before more definitive treatment is carried out. There is lots of morbidity associated with severe anemia as well as transfusion.

Objective

Primarily to assess if patients requiring blood transfusion for abnormal uterine bleeding are at greater risk of having a hysterectomy proximal to transfusion and secondarily to determine how many units were required amongst patients undergoing surgical intervention.

Methods

Retrospective review of patients seen in the emergency department requiring admission and blood transfusion for AUB between January 11, 2015 and February 21, 2017. Patient were searched utilizing ICD-10 codes and cross referenced with having blood transfusion. Inclusion included age ≥ 18 years old, admission from the ED and having a transfusion. Excluded if a prisoner, cancer, pregnancy or having a positive pregnancy test. 150 cases were identified and reviewed but only 35 (23%) met study criteria for analysis. Statistical analysis included t-test, chi-square and Fisher's exact test and p-value < 0.05 was significant.

Results

Mean (SD) age 43.9 ± 8.6 years-old and BMI 31.2 ± 7.0 kg/m² and median (range) parity 2(0-7) deliveries. The initial mean (SD) hemoglobin was 6.1 ± 1.6 and number of ED visits (median, range) 2(1-9), [71% had 1-3 visits and 26% had 4-6 visits]. 17% of patient had surgery at the time of initial ED/admission and 83% underwent non-surgical management [37% received MPA, 9% OCP, 3% estrogen and interestingly 34% were only transfused]. From initially 6 (17.1%) undergoing surgery (2 hysterectomy and 4 vaginal myomectomy/hysteroscopy) and ultimately 19 (54.3%) undergoing surgery (14 hysterectomy and 5 other). The mean (SD) number of transfusions and units transfused was significantly greater among patients undergoing any type of surgical intervention compare to those not undergoing any surgery (2.1 ± 1.5 vs. 1.2 ± 0.4 times, $p=0.04$ and 5.4 ± 3.9 vs. 3.0 ± 1.7 units, $p=0.04$) respectively. Similarly, significantly more patients undergoing hysterectomy were transfused more frequently and were transfused more units overall [2.6 ± 1.6 vs 1.2 ± 0.4 times, $p=0.005$ and 6.6 ± 3.9 vs 3.0 ± 1.7 units, $p=0.004$ respectively]. Overall, among patients receiving 4 or more units 75% had surgical intervention, while only 33.3% of those having less than 4 units had surgery.

Conclusion

Overall patients undergoing more number of transfusions and or ultimately receiving a greater number of units were most often found to undergo surgical intervention and ultimately hysterectomy. These patients need closer observation to avoid further exposure to needing unnecessary blood transfusion.