

Case Reports

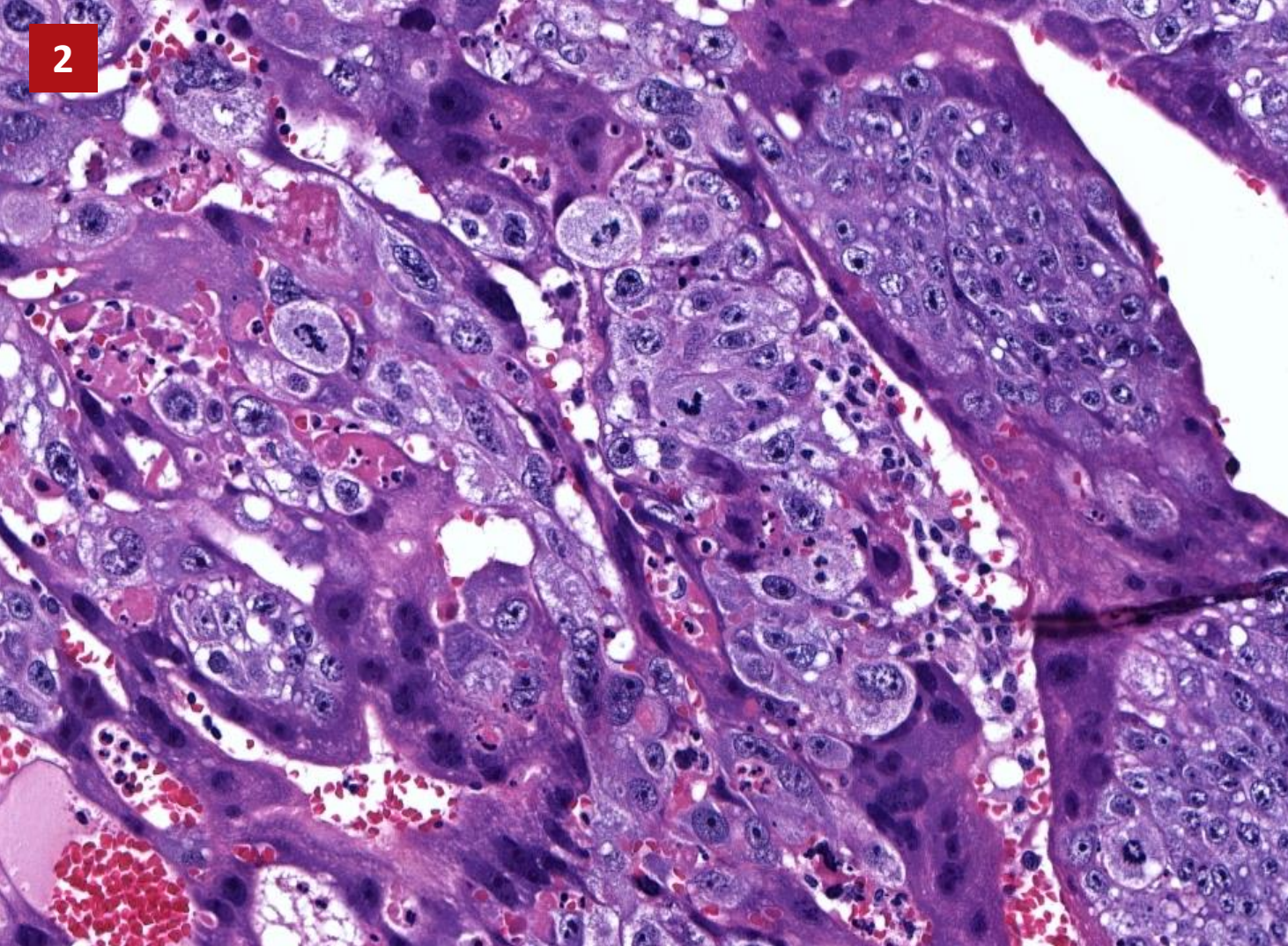
We report two rare causes of secondary PPH, uterine artery Pseudo-aneurysm and Choriocarcinoma, to enhance the awareness on rare PPH causes.

1st case:

28-year-old primipara who had forceps delivery complicated by 3B tear and manual removal of placenta with EBL of 800ml. She was initially discharged home with antibiotics, prior to discharge she received depo injection. The patient had multiple GP attendances with heavy vaginal bleeding and was treated with antibiotics and as suspected cause was the Depo injection, she was given Tranexamic acid. After 12 weeks she presented in Emergency Department with hypovolemic shock due to heavy bleeding. She was transfused 2 units of blood. Due ongoing bleeding she had examination under Anaesthesia and uneventful EVAC with EBL of 1.2liter and she was discharged home with antibiotics. Histology showed choriocarcinoma and the CT scan shown concerning features of metastatic deposits in the liver and lungs. She was referred to Gestational Trophoblastic Disease (GTD) centre in Sheffield, where has ongoing care.

2nd case:

31-year-old primigravida underwent an uneventful emergency caesarean section with EBL of 700ml. She had 3 readmissions due to Secondary PPH. On first readmission transvaginal scan was normal. The second time, patients had EUA with scan guided curettage. The scan showed high vascularity/bleeding from right cervical artery, for which a stitch was taken. During the procedure Foleys catheter was inserted in uterine cavity for compression. On the third readmission she was discussed with an interventional radiologist as suspicion of AVM and the CT angiogram was suggestive of a small pseudo-aneurysm from the right uterine artery. Patient was transferred to tertiary where right uterine artery pseudo-aneurysm was confirmed. She was successfully treated by selective catheterization of right uterine artery and recovered well.

1	WHO scoring system based on prognostic factors				2
	0	1	2	4	
Age, years	< 40	≥ 40	-	-	
Antecedent pregnancy	Mole	Abortion	Term	-	
Interval months from index pregnancy, months	< 4	4 - 6	7 - 12	> 12	
Pretreatment serum hCG (mIU/mL)	< 10 ³	10 ³ - 10 ⁴	10 ⁴ - 10 ⁵	> 10 ⁵	
Largest tumor size (including uterus), cm	< 3	3 - 4	≥ 5	-	
Site of metastases	Lung	Spleen, kidney	Gastrointestinal	Liver, brain	
Number of metastases	-	1 - 4	5 - 8	> 8	
Previous failed chemotherapy	-	-	Single drug	≥ 2 drugs	

Discussion

Acquired Arterio-Venous Malformation (AVM) and Choriocarcinoma are rare causes of secondary PPH.

These patients had multiple attendances with secondary PPH requiring blood transfusions, EUA and management in specialized centers. We need to have an open mind regarding the causes of secondary PPH while investigating and managing it.

Choriocarcinoma is usually after complete or partial moles, but rarely may occur after term pregnancy. Vaginal bleeding is the most common symptom, can also present initially with metastatic disease, especially after non-molar pregnancy, in the lungs, lower genital tract, liver and brain. Diagnosis can only be made based on histology. Treatment depends on WHO scoring system, can be with metothexate or multiagent chemotherapy under GTD centers. Choriocarcinoma has a good prognosis if diagnosed timely and managed in appropriate centre with chemotherapy.

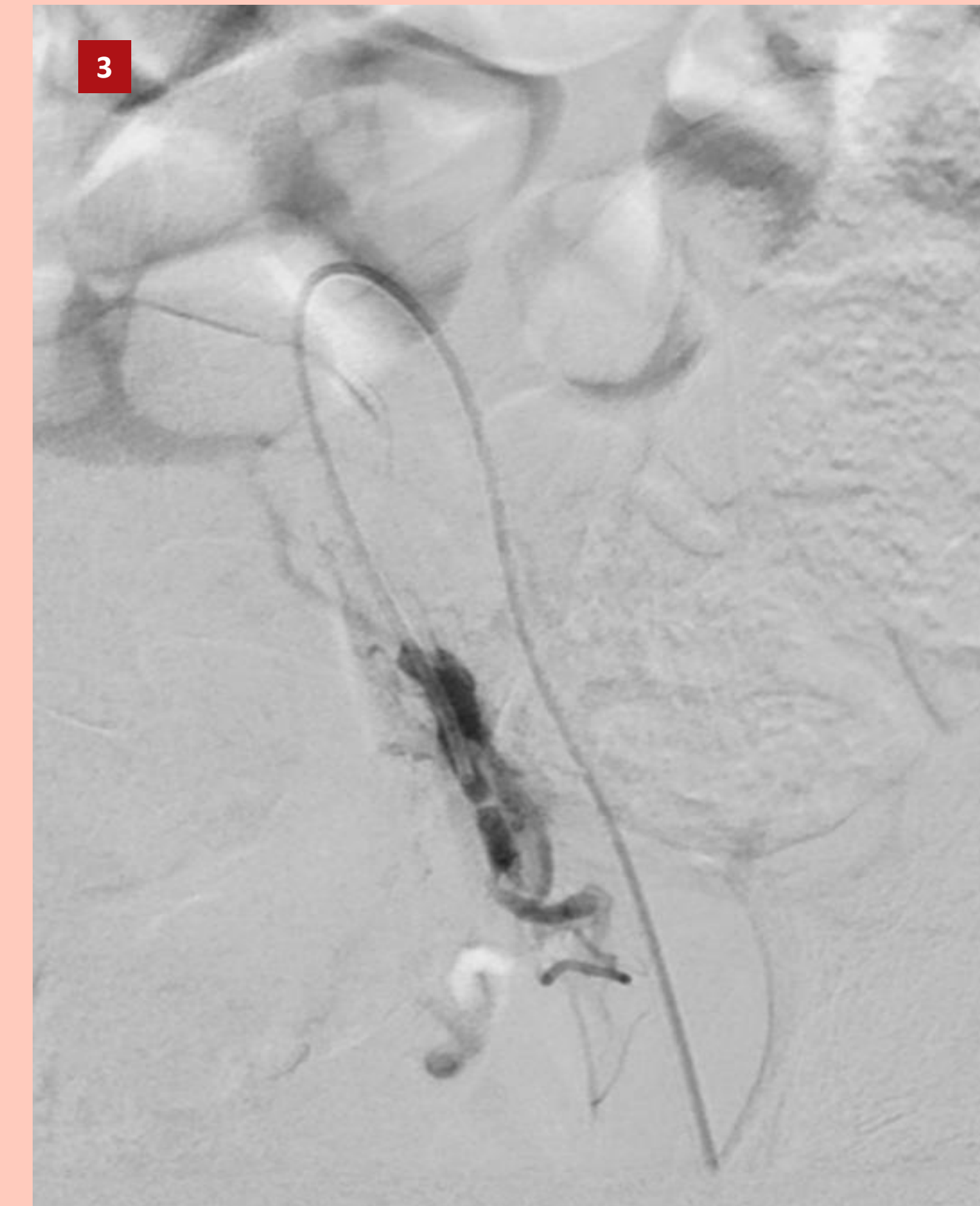
Uterine AVM may be congenital or acquired. Acquired AVM are associated with iatrogenic uterine trauma, most commonly during caesarean section, pelvic surgery or uterine curettage. It can also be associated with infections, retained products, gynaecological cancers and gestational trophoblastic disease.

The gold standard in diagnostic of AVM is digital subtraction angiography, however this is not commonly done to achieve the diagnosis itself due to being invasive method. Doppler USS, CT and MRI have been shown to be helpful in making diagnosis of AVM.

The treatment option of choice is currently embolization, this allows women to preserve fertility. Hysterectomy is still used as a treatment for postmenopausal women and when the bleeding is life-threatening.

Conclusion

Choriocarcinoma and acquired AVM should be considered as a possible cause of secondary PPH in cases where initial management of PPH, such as use of uterotonic medications, EUA with curettage and treatment with antibiotics, don't resolve the bleeding further investigations and interventional radiology review should be obtained. Any tissue should be sent for histology. Early identification of choriocarcinoma and uterine artery acquired AVM allows for specialist treatment which is necessary for preservation of future fertility.



Images

1. <https://www.pathologyoutlines.com/topic/placentachoriocarcinoma.html>
 2. <https://www.pathologyoutlines.com/topic/placentachoriocarcinoma.html>
- 4 and 4 – Images from AVM embolization

References

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