wjpmr, 2022,8(3), 287 – 290.

WORLD JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.wjpmr.com

SJIF Impact Factor: 5.922

Review Article

ISSN 2455-3301

WJPMR

REPEATED DEEP VEIN THROMBOSIS (DVT) REVEALING LEFT INFERIOR VENA CAVA

***Dr. Bahij Youssef, Dr. Khayoussef Mehdi, Dr. Bakkali Tarik, Dr. Mouhanni Safaa, Pr. Samir El Kheloufi and Pr. Lekehal Brahim**

Vascular Surgery, Ibn Sina Hospital, Rabat, Morocco.

***Corresponding Author: Dr. Bahij Youssef**
Vascular Surgery, Ibn Sina Hospital, Rabat, Morocco.

Article Received on 17/01/2022 **Article Revised on 07/02/2022** **Article Accepted on 27/02/2022**

SUMMARY

Unlike the arteries, the sub-diaphragmatic venous trunks can be subject to numerous malformations and anatomical variations related to the complexity of their embryonic development. The upstream hemodynamic impact of these abnormalities is constant and bilateral, but their clinical impact may be delayed or even non-existent, in the absence of associated cardiac malformations. We report the case of a 54-year-old woman in whom a left inferior vena cava was discovered following several episodes of right lower limb DVT.

1. INTRODUCTION

The inferior vena cava is normally located in the right side of the abdomen, more precisely to the right of the aorta.
The malformations of the inferior vena cava are very numerous, in relation to the complexity of their embryological development.

The left inferior vena cava is a variant of the norm; its upper segment is anterior to the aorta, while the lower segment (infrarenal) is located to the left of the aorta.

Its prevalence is 0.3%-0.5%. (10)

2. OBSERVATION

This is Mrs. NK, 54 years old, mother of 3 children, hospitalized for the management of a 3rd episode of Deep Vein Thrombosis.

The patient has a history of 2 episodes of DVT. The 1st in 1991 following prolonged bed rest related to viral meningitis during pregnancy.

The 2nd in 2011 without contributing factors (etiological assessment without particularities).

A notion of varicose veins of the lower limbs evolving since 2013 under medical treatment based on venotonics and elastic compression.

The patient presented to the emergency room with a picture of a large red leg with localized pain in the right calf of sudden onset.

On clinical examination, we note an enlarged limb, a decrease in calf swaying, with a positive Homans sign.

The rest of the clinical examination was unremarkable.

The patient underwent a venous echodoppler of the lower limbs demonstrating thrombophlebitis of the superficial and right popliteal femoral vein.

The patient was admitted to internal medicine where she was put on anticoagulant at a curative dose.

During his hospitalization, a CT phleboscan of the lower limbs was performed showing a left inferior vena cava with compression of the right common iliac vein by the left common iliac artery and the vertebral body of L5. (Figure 1)

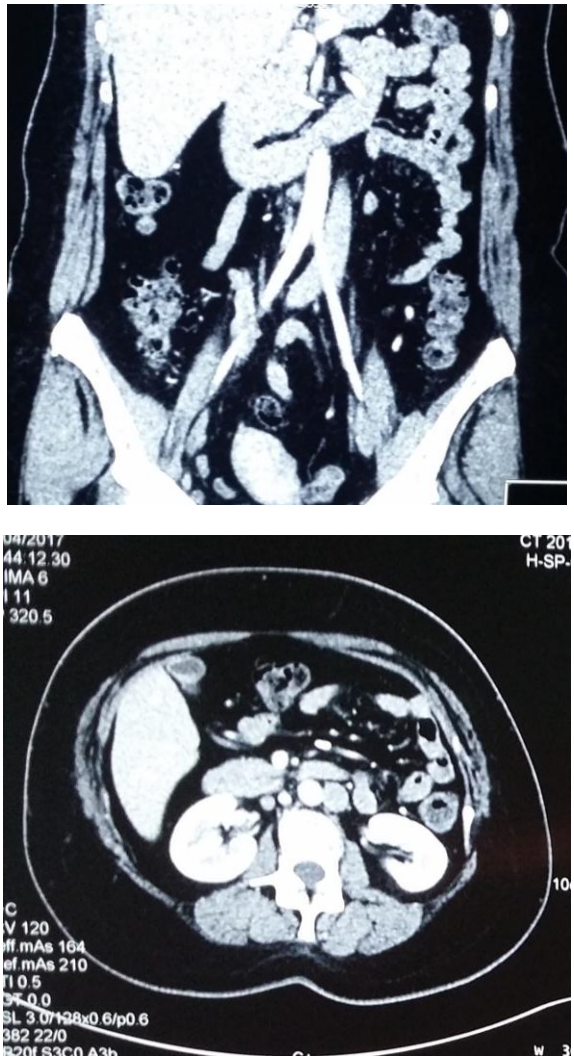
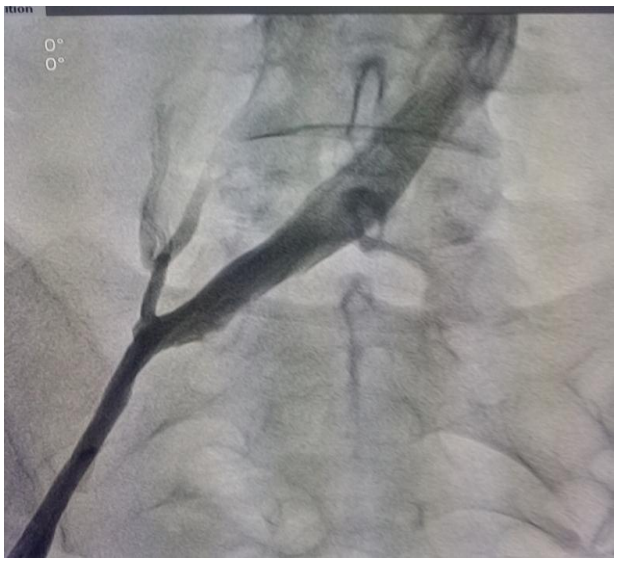


Fig. 1: CT sections showing the inferior vena cava located to the left of the abdominal aorta.

A venography by puncture of the right common femoral vein was performed in the vascular surgery department and confirmed the diagnosis by showing an inferior vena cava located along the left flank of the abdominal aorta (figure 2)



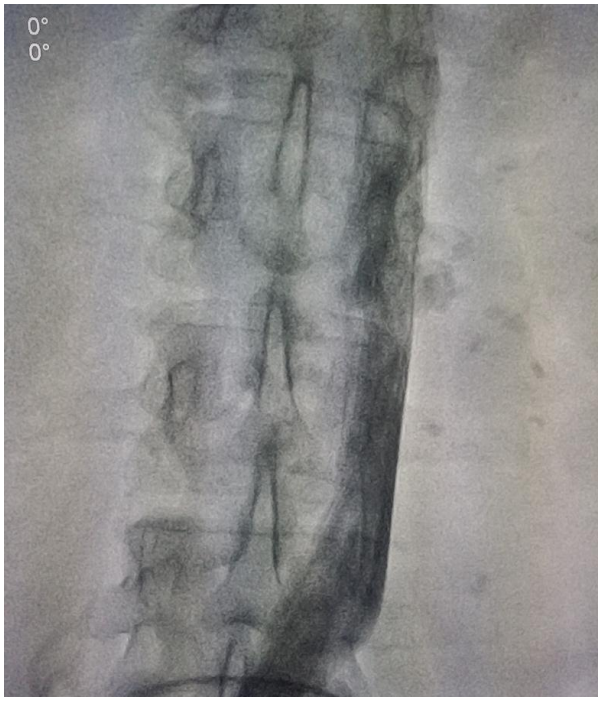


Fig. 2: Venographic images showing a left inferior vena cava.

DISCUSSION

IVC abnormalities were first described over 200 years ago by Abernethy.[1] Their frequency is today variable according to the authors, and even according to the type of anomaly.

It even appears that approximately 90% of congenital malformations of the IVC reach the supra-renal and hepatic segments of the IVC, while only 6% of these anomalies concern the renal and infra-renal segments of the IVC.[2]

Concerning IVC anomalies as a whole, Kellman mentioned in 1988 a prevalence of radiological anomalies of the IVC in the general population varying from 0.07% to 8.7% depending on the target population.[3]

In 2002, a meta-analysis of IVC abnormalities in patients with deep vein thrombosis of the lower limbs estimated this prevalence at 0.5% in the general population.[4]

Finally, a recent work from 2007 on a population of 7972 patients who had an abdominal scan for various reasons estimated this prevalence at 0.15%.[5]

The prevalence of IVC anomalies therefore remains variable, ranging between 0.15% and 1.2% in the general population for the most recent studies.[11]

The incidence of IVC malformations therefore remains significant, encouraging us not to ignore this pathology in the context of our daily practice.

Finally, the study by Obernoster cited above,[4] found, among 97 patients who presented DVT of MI, an anomaly of the IVC in 5 of the 31 patients who presented DVT with associated iliac thrombosis. In addition, it allowed us to affirm that among patients with DVT of MI, those with an IVC anomaly developed DVT at a younger age (25 years on average) than that of patients developing DVT without anomaly. of the associated VCI.

It should be noted that in 2003, a Chinese study reported the case of a young patient aged 7 at the time of diagnosis: the onset of painless edema of the right lower limb 2 days ago had prompted the performance of an ultrasound. Doppler followed by a scanner, thus making it possible to highlight an iliac DVT and lower cellar on malformation of the IVC (absence of the renal segment, agenesis of the supra-renal segment and thrombosis of the infra-renal segment). It should be noted here that this young patient was at the time the youngest patient having presented an idiopathic DVT in the English literature.[6]

In a 2006 prospective study including 116 patients aged under 50 with idiopathic DVT, an association with an IVC abnormality was found in 5% of cases.[7]

In a work dating from 2002, an anomaly of the IVC was found in 5 patients among 31 patients presenting with thrombosis of the iliac veins (i.e. approximately 16%). Insofar as the patients carrying an associated malformation of the IVC were on average 25 years old, these results thus made it possible to underline that a congenital anomaly of the IVC had to be sought before the occurrence of a thromboembolic episode. including the iliac veins in patients under 30 years of age.[4]

In addition, Koc's study of nearly 8000 patients who underwent CT imaging,[8] and estimating the prevalence of IVC abnormalities at 0.15% in the general population, suggests that in l In the absence of this examination, the frequency of IVC abnormalities is probably underestimated in patients presenting with DVT, because echo-Doppler has insufficient sensitivity to highlight them.

This is why it has been proposed to systematically use CT to explore idiopathic DVT in young subjects.[9]

3. CONCLUSION

This article shows the interest of evoking, in the face of an "idiopathic" DVT, an etiology of the inferior vena cava malformation type.

Indeed, the incidence of IVC anomalies in the general population is far from negligible, especially in the case of associated DVT.

we can only recall here the importance of considering this diagnosis, and therefore of carrying out appropriate complementary examinations, in particular in the face of thromboembolic pathologies in young patients.

Thus, the realization of a scanner seems to be an essential step in front of the occurrence of an idiopathic DVT of the young subject, in order not to miss a malformation of the IVC.

Finally, following this analysis, we came to consider recognizing the congenital anomaly of the IVC as a persistent risk factor for DVT in its own right, and therefore as a factor influencing the continuation of lifelong anticoagulant treatment.

4. BIBLIOGRAPHIC REFERENCES

1. ABERNATHY J. Account of two instances of uncommon formation in the viscera of the human body. Philos Trans R Soc., 1793; 83: 59–66.
2. SHAH NL, CHANLEY CJ, PTINCE MR, WAKEFIELD TW. Deep venous thrombosis complicating a congenital absence of the inferior vena cava. Surgery, 1996; 120: 891-896.
3. KELLMANN GM, ALPERN MB, SANDLER MA, CRAIG BM. Computed tomography of vena cava anomalies with embryonic correlation. RadioGraphics, 1988; 8: 533-56.
4. Obernoster A, Aschauer M, SCNEDL W, Lipp RW. Abnormalities of the inferior vena cava in patients with iliac venous thrombosis. Ann InternMed, 2002; 136: 37-41.
5. KOC C, OGUZKURT Interruption or congenital stenosis of the inferior vena cava: prevalence, imaging, and clinical findings. Eur J Radiol, 2007; 62: 257-266.
6. SHUN LAU AMY WL, LAU ANIDA SF, CHONG HONG SHING LAM Venous thrombosis complicating inferior vena cava anomalies in a 7-year-old boy. Pediatric Radiol, 2003; 33: 143–145.
7. GARCIA-FUSTER MJ, FORNER MJ, FLORENTE B, SOLER J, CAMPOS S. Inferior vena cava malformations and deep venous thrombosis. Rev Esp Cardiol, 2006; 59: 171-75.
8. KOC C, OGUZKURT Interruption or congenital stenosis of the inferior vena cava: prevalence, imaging, and clinical findings. Eur J Radiol, 2007; 62: 257-266.
9. MAALOULY G et al. Deep vein thrombosis. Rev Med Intern, 2010; doi:10.1016.
10. SCNEIDER JG, EYNATTEN MV, DUGI KA, DUEX M, NAWROTH PP. Recurrent deep venous thrombosis caused by congenital absence of the inferior vena cava and heterozygous factor V Leiden mutation. J InternMed, 2002; 252: 276-280.
11. Claire Goutet-Leonard. Deep vein thrombosis and anomaly of the inferior vena cava: study around three cases. Life Sciences [q-bio], 2011. hal-01733218.