May-Thurner Syndrome and Thrombosis in an Adolescent: A Multidisciplinary Diagnosis

Síndrome de May-Thurner e Trombose em Adolescente: Um Diagnóstico Multidisciplinar

Bárbara Mota[1*], Lara Lourenço[1]

*Corresponding Author/Autor Correspondente:
Bárbara Mota [barbaramota@hotmail.com]
Pediatric Department, Centro Hospitalar Universitário de São João,
Alameda Prof. Hernâni Monteiro, 4200-319 Porto, Portugal
ORCID iD: 0000-0002-9691-3511

KEYWORDS: Adolescent; May-Thurner Syndrome/diagnosis; Venous Thrombosis/diagnosis
PALAVRAS-CHAVE: Adolescente; Síndrome de May-Thurner Syndrome/diagnóstico; Trombose Venosa/diagnóstico

Dear Editor,

May-Thurner syndrome (MTS) is a rare condition, caused by compression of the left iliac vein by the right iliac artery against the fifth lumbar vertebra, associated with increased risk of venous stasis, venous congestion, proximal or recurrent varicosities and even deep vein thrombosis (DVT).[1,2]

DVP in children is rare with an incidence of 0.07-0.14 per 10 000 children reported. Often it is associated with conditions such as central venous catheterization, sepsis, cancer, medications (contraceptive pill) and hematological conditions.[3]

MTS is rarely diagnosed because diagnostic workup is seldom continued once the diagnosis of a DVT has been established.[1]

We describe the case of a 16-year-old girl, with history of overweight (body mass index 28) and under estrogen-containing oral contraceptives (OCPs), was transferred to our emergency department due to edema and pain in the lower left limb.

She was evaluated by the vascular surgery colleague and was advised to wear elastic compression stockings up to the thigh, was prescribed enoxaparin 60 mg every 12 hours (1 mg/kg/dose subcutaneous) and was advised not to take OCPs. In consultation, she performed prothrombotic and genetic study that came out negative. She was referred to adolescent consultation under the suspicion of MTS to exclude differential diagnoses. Her angio-computed tomography (CT) scan confirmed the diagnosis and other pathologies were dismissed. She maintains treatment with apixaban and has not had any other episodes since then.

May-Thurner syndrome in adolescents is a rare phenomenon that is sparsely reported unlike the condition in adults which is widely described in the literature.[3]

1. Pediatric Department, Centro Hospitalar Universitário de São João, Porto, Portugal.

Received/Recebido: 2023/01/19 - Accepted/Aceite: 2023/02/15 - Published online/Publicado online: 2023/02/22

Interestingly, in this case described, the adolescent had additional acquired risk factors for thrombosis as she was overweight and under OCPs, which may have contributed as concomitant risk factors in addition to the syndrome, highlighting the multifactorial etiology of thrombotic events, particularly in children, as it has been described in literature.[4]

As pediatricians, we should be aware that thorough investigation for co-existing thrombophilic risk factors in these patients is mandatory and failure to identify this condition increases the risk of morbidity and mortality of these patients.[5]

Strategies to decrease modifiable risk factors, including avoiding estrogen-containing contraception or weight management should be addressed with adolescents and parents.[2]

CONTRIBUTORSHIP STATEMENT/DECLARAÇÃO DE CONTRIBUIÇÃO

BM and LL: Article's conception and design, drafting and review of the manuscript.

BM e LL: Conceção e desenho do artigo, redação e revisão do manuscrito.

RESPONSABILIDADES ÉTICAS

CONFLITOS DE INTERESSE: Os autores declaram a inexistência de conflitos de interesse na realização do presente trabalho.

FONTES DE FINANCIAMENTO: Não existiram fontes externas de financiamento para a realização deste artigo.

CONFIDENCIALIDADE DOS DADOS: Os autores declaram ter seguido os protocolos da sua instituição acerca da publicação dos dados de doentes.

CONSENTIMENTO: Consentimento do doente para publicação obtido.

PROVENIÊNCIA E REVISÃO POR PARES: Não comissionado; revisão externa por pares.

ETHICAL DISCLOSURES

CONFLICTS OF INTEREST: The authors have no conflicts of interest to declare.

FINANCING SUPPORT: This work has not received any contribution, grant or scholarship.

CONFIDENTIALITY OF DATA: The authors declare that they have followed the protocols of their work center on the publication of data from patients.

PATIENT CONSENT: Consent for publication was obtained.

PROVENANCE AND PEER REVIEW: Not commissioned; externally peer reviewed.

REFERENCES

1. Gökçe Ş, Keskin G, Yaşar ŞK, Arslan AT, Cerit Z, Koska Öİ, et al. A case of May-Thurner Syndrome: An old anomaly but, a new suggestion: A case report. Malawi Med J. 2019;31:230-2. doi: 10.4314/mmj.v31i3.12.
2. Raffini L, Raybagkar D, Cahill AM, Kaye R, Blumenstein M, Manno C. May-Thurner syndrome (iliac vein compression) and thrombosis in adolescents. Pediatr Blood Cancer. 2006;47:834-8. doi: 10.1002/pbc.20728.
3. Hansrani V, Moughal S, Elmetwally A, Al-Khaffaf H. A review into the management of May-Thurner syndrome in adolescents. J Vasc Surg Venous Lymphat Disord. 2020;8:1104-10. doi: 10.1016/j.jvsv.2020.05.006.
4. Avila L, Cullinan N, White M, Gaballah M, Cahill AM, Warad D, et al. Pediatric May-Thurner Syndrome-Systematic review and individual patient data meta-analysis. J Thromb Haemost. 2021;19:1283-93. doi: 10.1111/jth.15284.
5. Sedhai YR, Golamari R, Salei A, Alukal J, Basnyat S, Pathak S, et al. May-Thurner Syndrome. Am J Med Sci. 2018;355:510-4. doi: 10.1016/j.amjms.2017.09.011.