

## POISON OF GOLDEN GRAPES : HYPERVIRULENT STAPHYLOCOCCUS MUSCULOSKELETAL INFECTION ASSOCIATED WITH DVT IN PEDIATRIC

<sup>1</sup>MZ Mohd Hafiz, <sup>2</sup>AS Atikah, <sup>2</sup>W Nor Hidayah, <sup>2</sup>MN Nor Hafizah

<sup>1</sup>Department of Orthopedic, HUSM Kubang Kerian

<sup>2</sup>Department of Orthopedic Surgery, HSNZ, Kuala Terengganu

### INTRODUCTION

Deep vein thrombosis (DVT) is a rare disease in paediatric patients.<sup>(2)</sup> We report a paediatric patient who developed DVT in association with *Staphylococcus aureus* bacteraemia complicated with intramuscular abscess of right hip.

### CASE REPORT

12 years old boy, presented to us with 2 week history of right hip pain and swelling after multiple traditional massages. He had persistent fever and came in with septic shock. Septic parameter showed severe bacteraemia ongoing. Urgent US & CT right hip suggestive of intramuscular abscess of right hip (Figure 1). Incision and drainage was done to evacuate pus over right hip. Blood and pus culture taken intraoperatively grew *Staphylococcus aureus* bacteria sensitive to cloxacillin. Then, antibiotic was shifted to high dose of cloxacillin. Child right hip gradually improved after surgery but had marked pain and swollen over the contralateral hip and limb. Physical examination showed local heat and tenderness left hip joint accompanied by lower extremity swelling and limited motion. Doppler ultrasonography of the limbs showed DVT of left external iliac vein till proximal femoral vein (Figure 2). Child was treated with low molecular weight heparin for 2 weeks, and then changed to the oral antithrombotic agent.

### CONCLUSION

*Staphylococcus aureus* surface proteins and exotoxins contribute to thrombus formation through effects on the coagulation pathway and anticoagulation factors.<sup>(1)</sup> *Staphylococcus aureus* able to activate endothelial surfaces and platelets adherent. *Staphylococcus* exotoxins such as Pantone-Valentine leukocidin cause leukocyte lysis and injured endothelial surfaces.<sup>(1)</sup> These lead to micro thrombosis deep vein. DVT should be considered in children with *staphylococcus* musculoskeletal infections accompanied with swollen extremities and motion limitations.

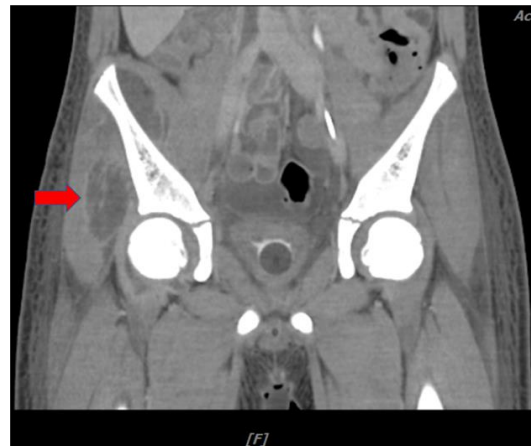


FIGURE 1

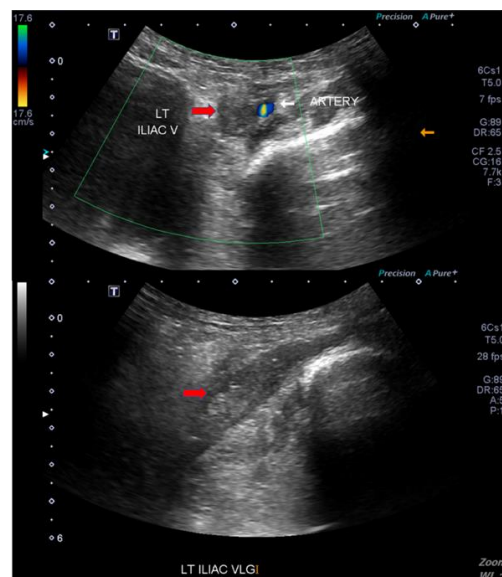


FIGURE 2

### REFERENCES

- 1) The role of hypervirulent *Staphylococcus aureus* infections in the development of deep vein thrombosis, *Martin E, Cevik C, Nugent K., 2012 Sep;130(3):302-8. doi: 10.1016/j.thromres.2012.06.013. Epub 2012 Jul 6.*