Lesson From Other Discipline's Decision in Managing Giant Haemangioma Of The Hemithorax : Case Report

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Background: The management of the giant and moderate size infantile haemangiomas are challenging problems, especially in health systems with limited resources in developing countries. The aim of presenting this case is to take a lesson from another discipline's decision in managing haemangioma.
Method: The author provide information based on clinical examination and surgical records of the patient with giant hemangioma which was consulted to plastic surgery team. A four month year old boy was consulted by pediatric surgery team with a giant size haemangioma on the right hemithorax.
Results: The treatment option for each haemangioma are different based on the case itself. Especially for this case, it seems better to be treated conservatively due to several reason, such as the phase of hemangioma, the location of the mass, the size, the donor morbidity.
Conclusion: Early surgical excision of a moderate size infantile haemangioma may be justified especially when there is difficulty of follow-up. This approach will prevent growth deformation, impact on nearby vital organs and psychological problems.
Keywords : *Giant Haemangioma, Conservative versus surgery*

Latar Belakang: Penatalaksanaan hemangioma infantil ukuran sedang dan besar adalah masalah yang pelik, terutama dalam sistem kesehatan dengan sarana prasarana terbatas di negara berkembang. Tujuan dari presentasi kasus ini adalah untuk mengambil pelajaran dari disiplin ilmu lain yang menangani kasus hemangioma yang sulit.
Metodologi: Penulis mendapatkan informasi dari pemeriksaan klinis dan rekam medis pembedahan pasien dengan hemangioma ukuran besar yang dikonsultasikan ke tim bedah plastik. Bayi laki-laki usia 4 bulan dikonsultasikan oleh tim bedah anak ke tim bedah plastik dengan hemangioma ukuran besar pada hemitorak dextra.
Results: Pilihan terapi untuk hemangioma berbeda-beda tergantung masing-masing kasus. Terutama pada kasus ini terapi konservatif tampaknya lebih baik dilakukan karena adanya beberapa alasan, seperti fase dalam hemangioma, lokasi massa tumor, ukuran, morbiditas area donor.
Ringkasan: Eksisi awal sebagai terapi untuk hemangioma infantil ukuran sedang dapat dibenarkan. Pendekatan ini akan mencegah deformitas akibat per-tumbuhan pesat massa dan efek ke organ vital yang berdekatan dan permasalahan psikososial lain.
Kata kunci : *Hemangioma besar, konservatif vs pembedahan*

The term haemangioma refers to the common tumor of infancy that exhibits rapid postnatal growth and slow regression during childhood [1]. The more precise designation is infantile haemangioma, so as not to cause confusion with uncommon vascular tumors that arise in late childhood and adulthood that are designated "haemangioma" or hemangioendothelioma.

Infantile haemangioma is the commonest benign tumour in infancy [2]. Knowledge about the differential diagnosis can enable clinicians to detect haemangiomas that may lead to complications that will necessitate a multidisciplinary approach. While the manage-

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Presented in The Fifteenth Annual Scientific Meeting of Indonesian Association of Plastic Surgeon. Semarang, Central Java. Indonesia.

Disclosure: *The authors have no financial interest to disclose.*

ment of the majority of small haemangiomas consists of simply watching or steroid treatment, giant and moderate size infantile haemangiomas are challenging problems, especially in health systems with limited resources in developing countries [3].

Although the majority of patients are treated conservatively, there is a need for surgical resection in certain cases depending on the size and site of the lesion and parental preference for a specific intervention. However, patients do respond very well to the wait and see policy and to steroid therapy.

We reported a case of haemangioma that went through surgical with pediatric surgeon as the operator and try to evaluate whether excision was the best therapy or not. Also a lesson we can establish from this case.

Case 1

A four month old boy was presented by his parents as outpatient at pediatric surgery clinic of Ciptomangunkusumo General Hospital, Jakarta Indonesia in November 2010. The parents described a progressive enlargement of a lump on the right hemithorax region of an otherwise healthy infant.

Examination confirmed 15x10x5 cm vascular tumor occupying at the chest on the right side. (see fig.1 and 2) The mass have definite margin, smooth surface , mostly are reddish color but some part mainly at the center , have purplish appearance indicating the first sign of involuting phase. There were occasional ulcerations & bleeding but no associated congenital skin problem.

Investigation

Blood: full blood count and urea &electrolytes, coagulation profile was normal. Computerized Tomography (CT) Scan were reported normal apart from the soft tissue mass on the right side of the chest and suspected as hemangioma.

Figure 1. Oblique preoperative view
The mass have definite margin,smooth surface , mostly are reddish colour but some part mainly at the center, have purplish appearance. Post ulcer and bleeding at the

Figure 2. Anterior preoperative view.
Comparing the proportion of the lesion to the body size.

Management and Outcome

The pediatric surgery team decided to operate the infant and consulted the patient to Plastic Surgery division for defect closure. Formerly we agree to close the defect with Split Thickness Skin Graft (STSG) but afterwards we decide to wait for a possible natural response and the use of steroid and disagree with the excision of the tumor. This was based on the

purplish appearance on the lump that indicate the early sign of involuting phase. Also clinical experience and empirical experiment that a case like this which treated conservatively gave better result than surgery itself.

The final decision from pediatric surgery was in toto tumor excision and close the defect with Full thickness Skin Graft (FTSG) using the skin upon the mass.(see Figure 3 and 4) All of the process was done by pediatric surgery team.

DISCUSSION

In developing countries, a lack of expertise is a key factor in many health issues including the management of complex vascular lesions of the head and neck. The approach to this lesion could be conservative or surgical, depending on certain factors including the age of the patient, and the size and site of the lesion. In order to prevent possible irreversible pressure complications, early diagnosis is important to manage vascular malformations correctly because of their distinct differences in morbidity, prognosis and treatment [2].

Figure 3. Immediate Post Operation
In toto tumor excision and close the defect with Full thickness Skin Graft (FTSG) by other surgeon.

The prognosis of two different types of hemangioma may vary from rapid and complete involution to continuous progression leading to ulceration, infection, heart failure and even death. The choice of the optimum method of treatment for a given hemangioma not only depends on the specific variety of hemangioma under consideration, but also may change with its precise extent, the age of the patient and the exact anatomical location of the angioma [4].

On the other hand, the social factors and associated problems of health settings in developing countries, including difficulties with follow up, the desire of the parents for immediate cure of the problem, and the variable success rates of the different conservative treatment modalities, may lead to a preference towards surgical excision. This may be the best option treatment for some but of course not all cases of Infantile Haemangioma [2].

Since most of these lesions remain asymptomatic and resolve spontaneously, conservative management is generally the rule. Nevertheless, the treatment options include surgical and non-surgical methods. Corticosteroid treatment, although recognized worldwide as a treatment of problematic haemangiomas cannot always control the growth of alarming haemangiomas. In these cases surgical excision may be indicated [1].

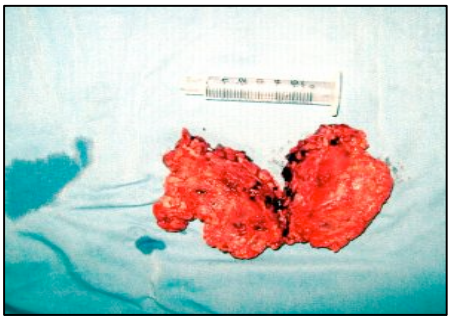

Figure 4. The mass size 15x10x5 cm ,divided as a routine procedure to see the centre part

Furthermore, for patients with severe problems, giant growth, and local complications surgical treatment can be a wise decision. Early surgery can be proposed in order to avoid definitive deformation or growth impairment of adjacent structures. It should be performed before school age and before the occurrence of psychological difficulties.[4]

Figure 5. (Left) Lysis of the graft 1 week after operation (center) 2 months after operation with visible scar (right) 4 months after operation the scar became more visible

For a comparison, We provide a table here to described the advantages and disadvantages of surgical vs non surgical therapy for haemangioma.

Table 1. Comparison of surgical and non surgical therapy for haemangioma

	Surgical	Non surgical
Timing of therapy	Sooner	Later
Size	Immediately gone	Takes time to resolve
Location (near the joints)	Graft may cause contracture	None
Graft Donor Morbidity	+++	none
Scar	+++	minimal
Contracture	+++	None
Phycological effect	Better	Worse
Hospital Cost	+++	+

In our patient, we're trying to give an example a patient with haemangioma thats treated by surgical. The special about this case is that it's a truly pediatric surgeon patient's from treatment before surgery, the surgery itself and post operative care. All are done by them. Formerly they want us to close the defect but we refuse for reason that the lump have shown signs of involuting phase and the location of the mass itself close to the joint, so the possibility of contracture is higher. Yet they continue the operation, from the beginning to the end without plastic surgery involvement. It shows that coordination between two departments haven't been established well enough. Each department still have their own ego and cannot fully trust other's decision. The pediatric surgeon insist on doing the excision and close the defect with FTSG from the skin of mass itself. Even if they insist on doing the excision, It will be wiser if the plastic surgeon do the graft so the final result will be satisfying.

A week after the operation, the graft was lysis. The patient then treated with antiseptic solution (Hemoloc) twice a day. The patient went home after a month been hospitalized. Four months after the operation, the parents are satisfy with the surgery although it left a very visible scar but the most important thing for the parents is the lump have been fully excised.

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Acknowledegement
We gratefully thank Donna Savitry, MD for her assisstance in reviewing this article and Nandita Melati M.D. for basic editing and proof-reading.

REFERENCES

1. A. Hussain, H. Mahmood & H. Almusawy : Moderate size infantile hemangioma of the left side of the face, conservative or surgical treatment?: Case report and review of literature . The Internet Journal of Pediatrics and Neonatology. 2008 Volume 8 Number 1
2. A. Hussain, H. Mahmood & H. Almusawy : Moderate size infantile hemangioma of the left side of the Neck, conservative or surgical treatment?: Case report. Journal of Medical Case Reports . 2008
3. Thorne, Charles Et all. Grabb and Smith's Plastic surgery 6th ed, Chapter 22 : Vascular anomalies.Wlliam and Wilkins. 2007
4. Edgerton, Milton. The Treatment of Haemangiomas with special reference to the role of steroid therapy. Ann surg. May 1976