

be explained by poor-doctor-patient relationship where communication and explanation to patients is lacking.<sup>8</sup> In spite of the low number of patients informed of the referral, many patients accepted seeing the psychiatrist and accepted psychiatric treatment. This emphasizes the positive attitude towards psychiatry in the Saudi culture as found in other studies.<sup>3,5,6</sup> Discharge of patients was not up to the liaison cooperative level, where joint decision is taken by both the physician and the psychiatrist, but also it was not fully independent and the psychiatrists were notified in 84.6% of the cases. This is an area where psychiatrist and GI physicians have to develop and discuss jointly the disposal of referred patients.<sup>8</sup> Also, cases referred to were shown to be more severe and responded more to psychotropic medication and some needed combined psychotherapy.<sup>9</sup> Response to treatment may indicate that GI patients with psychiatric comorbidity are likely to be chronic and difficult to respond to treatment, which stresses the joint and close work up of these cases between psychiatrist and physicians where more planned, comprehensive and multidisciplinary approach to management is needed to achieve a better response to treatment.<sup>8,9</sup> Psychiatric diagnoses in this series of patients may not be conclusive due to small numbers, but major depression and GAD are common as shown in other subspecialties.<sup>6</sup> On the other hand, panic disorder and drug abuse are also evident and this is supported by previous studies in GI patients.<sup>2</sup> As expected IBS was more common in this sample (30.8%) and panic disorder is the more common to be associated with as shown in several reports.<sup>1,2</sup> Delirium to be associated with IBS may be due to old age or severe electrolyte imbalance due to diarrhea or just due to other different reasons.<sup>2</sup> Alcohol and drug abuse is only associated with liver cirrhosis and that is understandable.<sup>2</sup> Peptic ulcer was associated more with major depression and GAD and this is understandable and explainable by other reports.<sup>1,2</sup>

This study being prospective and for 3 years, presents a reasonable valid and stable background to understand GI psychiatric consultations, where a close relationship of GI and psychiatric disorders appear evident and many areas need development. Some of these are, communication with patients for informed referral, better detection and diagnosis of common psychiatric disorders, better education and training of non-psychiatrists to treat common psychiatric disorders, better liaison in management and disposal of referred patients, and improvement of effectiveness of treatments provided. Future research to explore specific areas such as those mentioned above or other aspects of the GI C/L psychiatry, is definitely needed to rectify some of the flaws of this study and develop C/L work for the excellence of our patient care.

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## References

1. Olden KW, Drossman DA. Psychologic and psychiatric aspects of gastrointestinal disease. *Med Clin North Am* 2000; 84: 1313-1327.
2. Rundell JR, Wise MG. In: Textbook of consultation-liaison psychiatry. 2nd ed. Washington (DC): American Psychiatric Press Inc; 2001. p. 732-767.
3. Abumadani MS, Hafeiz HB, Al-Quorain A, Yasawy MI, Abdulkarim MM. Life events in ulcerative colitis: A case-control study. *The Saudi Journal of Gastroenterology* 2002; 8: 53-58.
4. Huyse FJ, Herzog T, Lobo A, Malt UF, Opmeer BC, Stein B. European consultation-liaison psychiatric services: The ECLW Collaborative Study. *Acta Psychiatr Scand* 2000; 101: 360-366.
5. Ghubash R, Hamdi E, Bebbington P. The Dubai community psychiatric survey: Acculturation and the prevalence of psychiatric disorders. *Psychological Medicine* 1994; 24: 121-133.
6. Alhamad AM. Spectrum of psychiatric morbidity in neurobiological inpatients. *Saudi Med J* 1998; 19: 683-687.
7. De-Jonge P, Huyse FJ, Ruinemans GM, Stiefel FC, Lyons JS, Slaets KP. Timing of psychiatric consultations: the impact of social vulnerability and level of psychiatric dysfunction. *Psychosomatics* 2000; 41: 505-511.
8. Rigatelli M, Ferrari S, Uguzzoni U, Natali A. Teaching and training in the psychiatric-psychomatic consultation-liaison setting. *Psychother Psychosom* 2000; 69: 221-228.
9. Olden KW. Refractory gastrointestinal symptoms: a combined medical psychiatric approach. *Semin Gastrointest Dis* 1999; 10: 37-45.

## Incidence and patterns of bone marrow involvement in Ewing's sarcoma

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**E**wing's sarcoma (ES) is a member of Ewing's family of tumors, comprised of a spectrum of malignancy of bone and soft tissue. It accounts for 40% of primary bone tumors in childhood with peak incidence of 10-15 years and rare below 5 years and above 30 years.<sup>1</sup> Ewing's sarcoma may spread within the bone of origin, through medullary cavity or through bone cortex in extra-osseous soft tissue. It is found most frequently in mid shaft of a long bones, specially the femur or in flat bone of the

trunk (vertebrae, ribs) but may arise almost in any bone. Approximately 20% of patients will have evidence of overt metastasis at presentation.<sup>2</sup> Bone marrow (BM), rarely is the only site of metastasis but it is involved in one third of patients with pulmonary metastasis and two-thirds of patients with bone metastasis.<sup>3</sup> The aim of this study is to detect the incidence and patterns of BM involvement in patients with ES referred to an oncology center. The study included 111 patients who had been diagnosed to have ES at King Faisal Specialist Hospital and Research Centre (KFSHRC), Riyadh, Kingdom of Saudi Arabia, between January 1988 and December 2002. The diagnosis of ES was established based on typical histology and whenever possible, immunohistochemistry. As part of staging work up, BM examination was carried out on all patients using Jamshidi needle. It includes unilateral and rarely bilateral BM biopsy and aspiration. After staining with Wright-Giemsa, BM aspirate smear was examined to detect presence of tumor cells and whenever positive periodic acid Schiff (PAS) stain was carried out. Bone marrow trephine biopsy and clot section were stained with eosin and hematoxylin and examined for the presence of malignant cells. The medical charts for the 2 positive patients were reviewed. The collected data for each patient was entered into an electronic database for analysis. Out of 111 patients diagnosed with ES at KFSHRC; there were 67 (60%) males and 44 (40%) females with male to female ratio of 1.5:1. Median age at diagnosis was 14 years (range 1 to 49 years). The most frequently affected primary site was the pelvis in 23 (21%) patients, followed by femur in 17 (15%) patients and skull in 14 (13%) patients, while other sites were less frequent ranging from 1-7 patients per site (**Table 1**). All patients had BM examination after establishment of diagnosis of ES as part of staging workup. Ninety-eight (88%) patients had both BM aspiration and biopsy, and only 2 (2%) had bilateral biopsies.

Bone marrow was normocellular in 95 (85%) patients and hypocellular in 17 (15%) patients. The median length of BM trephine was 0.9 cm with range from 0.2-2.5 cm. Thirty (27%) trephine biopsies were not adequate, either due to lack of intertrabecular spaces or due to technical damage. The BM was involved by ES in 2 patients. In one patient, both aspiration and trephine biopsy were positive and in both patients, the detected malignant cells were in clumps. The first patient had metastasis to the lung and cervical lymph node and BM was negative on presentation, however, subsequent evaluation demonstrates BM involvement. The second positive patient had localized lesion at presentation and did not have BM examination at diagnosis, but subsequent evaluation

**Table 1** - The frequency of disease according to the primary site.

Site of disease	Frequency n (%)
Pelvis	23 (21)
Femur	17 (15)
Skull	14 (13)
Ribs	10 (9)
Tibia	9 (8)
Fibula	7 (6)
Humerus	5 (4.5)
Abdomen	2 (1.8)
Foot	4 (3.6)
Leg	3 (2.7)
Scapula	3 (2.7)
Vertebra	3 (2.7)
Other sites	11 (10)

showed BM involvement in addition to metastasis to both tibia and left orbit. It was difficult to find any correlation between the primary site and the presence of BM involvement due to the small number of involved BM. The prognostic importance of documenting disease, extent is evident in reporting survival difference of patients with versus patients without metastatic disease. The incidence of BM involvement at diagnosis is not precisely known.

An incidence of 16% of BM involvement had been reported in different studies. Gangir et al,<sup>4</sup> had reported BM involvement in 19 patients out of 122 patients with ES and Hayes et al,<sup>5</sup> had reported 3 patients with BM involvement out of 18 patients with ES. In another study it involved 59 patients with ES, Oberlin et al,<sup>3</sup> demonstrated by morphology, focal BM involvement in 13 (22%) patients, 12 of them had extramedullary sites of metastatic disease. The last study involved extensive BM investigations which included 2 BM biopsies and 10 BM aspirations from 10 different sites.<sup>3</sup>

In our study, we believe that we have low frequency of BM involvement in ES due to multiple factors, inadequacy of BM material including the length of the biopsies, content and a single site study in almost all patients except 2. The study had a number of limitations, there is no clinical correlation, and we do not know the outcome and survival in localized patients compared to metastatic patients. We recommend extensive BM study, which should involve adequate BM aspiration and biopsy from at least 2 different sites. The use of technetium scintigraphy to detect site of BM involvement by metastatic ES would be a sensitive scanning modality.<sup>6</sup> A prospective study addressing the correlation between BM involvement and clinical behaviour had been proposed in our institute.

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## References

1. Dorfman HD, Czerniak B. Bone cancers. *Cancer* 1995; 75: 203-210.
2. Horowitz ME, Malawer MM, Woo SY, Hicks MJ. Ewing's sarcoma family of tumours: Ewing's sarcoma of bone and soft tissue and the peripheral primitive neuroectodermal tumours. In: Pizzo PA, Poplack DG editors. Principles and Practice of Pediatric Oncology. 2nd ed. Philadelphia (PA): Lippincott Williams & Wilkins; 1993. p. 831-863.
3. Oberlin O, Bayle C, Hartmann OR, Terrier-Lacombe MJ, Lemerle J. Incidence of bone marrow involvement in Ewing's Sarcoma: Value of extensive investigations of the bone marrow. *Med Pediatr Oncol* 1995; 24: 343-346.
4. Cangir A, Vietti TJ, Gehan EA, Burgert EO Jr, Thomas P, Tefft M et al. Ewing's sarcoma metastatic at diagnosis. Results and comparisons of the two intergroup Ewing's sarcoma studies. *Cancer* 1990; 66: 887-893.
5. Hayes FA, Thompson EI, Parvey L, Rao B, Kun L, Parham P et al. Metastatic Ewing's sarcoma: remission induction and survival. *J Clin Oncol* 1987; 5: 1199-1204.
6. Jane GR, Miller JH, White L, Laug WE, Shore NA. Improved detection of metastatic Ewing's sarcoma with the use of bone marrow scintigraphy. (Case Reports. Journal Article) *Med Pediatr Oncol* 1987; 15: 78-81.

## Challenges in creating the educated surgeon in the 21st century. *Where do we stand?*

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Improved performance, which remains a constant concern in the health service, puts a heavy burden and responsibility on health planners. This has become an increasingly difficult task in view of the fast changes in society in general and medicine in particular.<sup>1</sup> The rate of changes in medicine nowadays, resembles those associated with the industrial revolution in England, 150 years ago. In the field of surgery, 2 major changes occurred, the appearance and the increasing importance of less invasive technologies, and the growing awareness of the importance of "systems" in surgical care. To cope with these challenges in the current surgical residency training program (SRTP), the traditional educational strategies in surgery need to be modified to keep pace with the recent developments in this field. We undertook a prospective qualitative study to pin point main problems and accordingly

lay out plans for a better performance in the future. The problems in the current SRTP at King Khalid University Hospital (KKUH), Riyadh, Kingdom of Saudi Arabia, have been examined by 2 approaches: 1. A quantitative semi-structured focus group study has been conducted through direct contact with the individuals involved in the SRTP. Three sources of information were contacted, residents (11), program directors (3) and consultants (7) involved in the training and education of the trainees. They were interviewed and their opinions in the current program were recorded. 2. A review of the international literature regarding the problems in surgical education and training using a computer based literature search (Medline). Most of the residents in the current surgical training program agreed that there is a limited number of clinical cases for their practice and training, and that they are not satisfied with the quantity and quality of operations they are performing during their training as first surgeons. They also think that a resident off day and a study leave should be made mandatory to enable them to attend conferences, symposia and surgical courses.

Program directors and consultants stressed on the small number of cases for the practice and training of the residents. They think that our senior surgical residents do not show full competence after graduation and they cannot be relied upon to perform major operations with confidence. They suggested that effort should be made to find alternatives in training, to fill the current deficiencies and to cope with the shortage in clinical cases.

Surgery has a long tradition of passing down skills to apprentices. With time, simple apprenticeships, involving family or friend gave way to more organized arrangements with formal rules, through which the residency system eventually merged.<sup>2</sup> A surgical training program was started in Guy's Hospital, London, United Kingdom, in 1972 in an attempt to meet the needs for surgical registrars. Thereafter, surgical training has been a structured and monitored process. The introduction of laparoscopic techniques during the early 1990s and its marked impact in surgical practice has resulted in a great turn in the methods of training in the SRTP. At KKUH, the 2 main important problems are the decreasing patient population for residents to practice at our medical center, and the second, is that our senior surgical residents do not show full competence after graduation as witnessed by their inability to perform major operations confidently, on their own. The decreasing patient population continues to be a major concern in other surgical programs. This has created the need for formal training outside the operating theatre.<sup>3</sup> The lack of full competence in graduated surgical residents has also been documented in other programs, Weigelt et al,<sup>4</sup>