

Table 1 - Indications for carotid endarterectomy.

Indications	n of patients
Symptomatic stenosis	
Stroke	7
Transient ischemic attack	5
Asymptomatic stenosis	1
Total	13

Table 2 - Results.

Operative mortality	n of patients
Complications	1
Hemorrhage	2
Hypertensive crisis followed by stroke	1
Neurologic deficit due to cranial nerve trauma	0
Thrombosis of carotid artery	
Postoperative death due to other cause (for example myocardial infarction)	2

operating room setting by competent vascular surgeons. The operation is carried out under local anesthesia with carotid cross clamping time of about 12-15 minutes. Medications required in the perioperative period were minimum. We did not use any artificial graft or vein graft (patch). As a result operations were less time consuming and less costly. Eversion endarterectomy was found effective for the management of redundancy in 3 of our patients. After mobilization of the ICA, redundant part was accommodated by proximally slide-shifting the bifurcation (for example, extending arteriotomy of CCA proximally) and ICA anastomosed.

The most important and difficult part of the total procedure and perioperative period was the control of hypertension or hypotension. Related literatures mention about the fluctuation of blood pressure due to manipulation of sinus nerve mechanism and the procedure as a whole.⁶ Two of our patients had postoperative hypertensive crisis followed by stroke. It is to be mentioned here that both of them had extreme fluctuation of blood pressure in the early postoperative period inspite of all measures. The present series of carotid eversion endarterectomy, though small in volume, highlights its necessity in a developing country with poor economy. Diagnosis of the disease by less costly and repeatable non-invasive procedures and conduct of the surgery with minimal resources and cost allowed our patient to avail it and return home with satisfactory result.

In conclusion we can say that carotid eversion endarterectomy is a plausible and worthwhile procedure to be considered in developing countries.

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References

1. Haque MA. Community participation in prevention and primary management of 'Brain attack'. Chandpur experience 1999 [unpublished data].
2. Shah DM. Techniques of eversion carotid endarterectomy and contemporary results. *Perspect Vasc Surg* 1998; 9: 49-62.
3. North American Symptomatic carotid Endarterectomy Trial (NASCET) Investigators clinical alert: benefit of carotid endarterectomy for patients with high grade stenosis of the internal carotid artery. *Stroke* 1991; 22: 816-817.
4. European Carotid Surgery Trialist's Collaborative Group: MRC European carotid surgery trial, interim results for symptomatic patients with severe (70-90%) or with mild (0-29%) carotid stenosis. *Lancet* 1991; 337: 1235-1243.
5. Entz L, Jaranyi Z, Nemes A. Comparison of perioperative results obtained with carotid eversion endarterectomy and with conventional patch plasty. *Cardiovasc Surgery* 1997; 5: 16-20.
6. Norman R, Hertzner NR. Postoperative management and complications following carotid endarterectomy. In Rutherford RR, editor. Vol. II. Vascular surgery. Philadelphia (PA): WB Saunders Company; 1995. p. 1554-1572.

The outcome of pregnancies complicated by hyperemesis gravidarum

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Hyperemesis gravidarum is a common complication of early pregnancy, and pathogenesis of this condition remains an enigma.¹ There is also no unified agreement on whether hyperemesis gravidarum has an impact on the final outcome of affected pregnancy.^{2,3} Inspired by these questions we decided to undertake this retrospective study. The files of 75 patients with hyperemesis gravidarum who delivered in Sultan Qaboos University Hospital, Oman between October 1998 and October 2002 were evaluated. All of them were first trimester, singleton pregnancies. The criteria to diagnose hyperemesis gravidarum was as follows: ketonuria of 2 pluses or more, vomiting at least 4 times a day and no other medical cause that might have been responsible for emesis. The control group of 150 patients with the same characteristics, but no excessive vomiting was selected randomly. The average age of the patients was identical in both groups at 26 years. The incidence of pregnancy complications, namely, anemia gravidarum, pregnancy induced hypertension, intrauterine growth retardation, polyhydramnios and oligohydramnios, diabetes, preterm rupture of

membranes and preterm delivery was almost the same in both groups. The percentage of instrumental deliveries was higher in the study (6.7%) than in the control group (4%), but the incidence of cesarean section was higher in the control group (10.7% in comparison with 6.7% in the study group). The average birth weight was very similar in both groups (2989g in the study and 3112g in the control) and so was the condition of the newborn (average Apgar score at 5 minutes of 9.7 in both groups). Interestingly, we have noticed a higher proportion of female newborns in the study group (61.3%) than in the control group (48.6%). This is consistent with other reports in the literature.⁴ There was one case of postpartum psychosis in the study group, which may confirm the suggestions that hyperemesis gravidarum is more common in the postpartum depressed women.⁵ Our number is of course, too small to draw any definite conclusion. In summary, this study confirms other similar reports,⁶ which suggest that hyperemesis gravidarum does not, in any significant way, affect the future outcome of pregnancy.

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References

1. Al Busaidi F, Krolikowski A. Is the pancreas responsible for hyperemesis gravidarum? *Saudi Med J* 2001; 22: 723.
2. Seto A, Einarson T, Koren G. Pregnancy outcome following first trimester exposure to antihistamines: meta-analysis. *Am J Perinatol* 1997; 14: 119-124.
3. Russo-Stieglitz KE, Levine AB, Wagner BA, Armenti VE. Pregnancy outcome in patients requiring parental nutrition. *J Matern Fetal Med* 1999; 8: 164-167.
4. Del Mar Melero-Montes M, Jick H. Hyperemesis gravidarum and the sex of the offspring. *Epidemiology* 2001; 12: 123-124.
5. Josefsson A, Angelsioo L, Berg G, Ekstrom C, Gunnervik C, Nordin C, et al. Obstetric, somatic and demographic risk factors for postpartum depressive symptoms. *Obstet Gynecol* 2002; 99: 223-238.
6. Eliakin R, Abulafia O, Sherer DM. Hyperemesis gravidarum: a current review. *Am J Perinatol* 2000; 17: 180-207.

Antisperm antibodies and unexplained infertility in Syria. *An unsolved problem?*

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Infertility is a common condition with important psychological, economic, demographic, and medical implications. Demand for infertility services has grown substantially in recent years, even though the prevalence of infertility has been stable.¹ Infertility is the inability to conceive after one year of intercourse without

contraception.² The prevalence of infertility is approximately 13-14%.³ The causes of infertility are: male factor 18%, tubal damage 14%, endometriosis 9%, coital problems 5%, cervical factor 3%, and unexplained 28%.⁴ Antisperm antibodies are now a well-established cause of male infertility, although this relationship was suggested more than 30 years ago. Current basic science research is improving our understanding of the complex relationship between infertility and the immune system. Approximately 10-30% of men with unexplained infertility are thought to have immunologic factors involved, confirming the importance of our research.⁵

Our study was carried out on 2 groups, the first was patients including 30 men and 24 women aged 18-45 years, who suffered from unexplained infertility (all their routine tests for evaluating infertility are normal). The second group was controls (who conceived their last child 2 years or less before the study), included 45 fertile men and women aged 17-52 years. Both groups were divided into age categories, category one included those <30 years, category 2 included those aged between 31-35 years, category 3 included patients aged 36-40 years; the last category (4) was formed by those who were >40. Based on the history of previous surgery in the reproductive tract in our male patients, we divided them into 2 groups, the first group included 11 patients with previous surgery, and the second group consisted of 19 patients with no previous surgery on their reproductive system. We evaluated the patients and control groups by detecting antisperm antibodies (ASA) (immunoglobulin (Ig) A, IgM, and IgG antibody classes) in their serum by 2 methods. The first method was indirect immuno-fluorescence (IIF) with "Antibodies against spermatozoa" from Euroimmun Company, Germany. Antibodies against spermatozoa antigens can bind to various structures of the spermatozoa (head, tail, and middle part). Fluorescence is most frequently found in the tail region, and this test would be considered positive when we found any fluorescent tail in diluted serum (1:10). This method is qualitative, and may be used as semi-quantitative by using a serial dilution of serum. The second method was an enzyme linked immunosorbent assay (ELISA) with "Spermatozoa Antibodies ELISA" from IBL Immuno-biological laboratories, Germany. This is a quantitative method, and the cutoff for this method was 150 mU/100µl (75 U/ml in the undiluted sample), hence, every sample over this cutoff was considered positive. **Figure 1** showed that out of 54 patients, 22 were positive for the presence of ASA (total) in their serum when the IIF method was used, these included 11 males and 11 females (50% men and women), and out of 45 controls, only 3 serums (males) contained antisperm antibodies. When the ELISA method was used, 20 out of 54 patients' serum was positive for spermatozoa antibodies, including 12 males and 8 females (60% men and 40% women), whereas 4 controls serum (2 men and 2 women) were