Entrobacter cloacae were multi resistant, and these microorganisms may be acquired from the hospital (exogenous), and not affected by traditional prophylaxis drugs. The infection rate of our study was 6%, which correlated with other studies that showed rates ranged from 1.5-5.9%. A common mistake in different studies, and opinions is that the culture, and isolation of anaerobic bacteria was minimal or omitted, whereas when wounds are investigated by appropriate microbiological techniques, anaerobes are found to form a significant proportion of the microbial population in both acute, and chronic wounds.6 Due to some anaerobes that are resistant to penicillin, treatment should also include appropriate coverage of those organisms. Surgical management, including drainage, is still the treatment of choice for SSI. The presence of penicillin-resistant anaerobic bacteria, however, such as the B. fragilis group, may warrant the administration of appropriate antimicrobial agents, such as clindamycin, cefotaxin, metronidazole, a carbapenem, or a combination of a lactamase inhibitor, and penicillin. In our study, we found that B. fragilis (mostly isolated), and other gram negative anaerobic bacilli were shown to be resistant to ampicillin, and cefazolin. Antimicrobial prophylaxis with agents, also effective against anaerobic bacteria (for example, cefotxin, cefotetan) should be considered, and prospective studies to assess the aerobic, and anaerobic microbiology of postoperative infection are warranted. According to literature data, perioperative prophylaxis can decrease the incidence of wound infection. Cefazolin is the most used agent for surgical prophylaxis in our hospital but can be ineffective against the increasingly common wound pathogens methicillin-resistant S. aureus, methicillin-resistant coagulase negative staphylococci, P. aeruginosa, and other species of gram-negative rods.

In conclusion, this study highlights the polymicrobial nature of SSI and the importance of anaerobic bacteria in SSIs, at same, time the importance of updating surgery prophylaxis to add a stronger antibiotic that may decrease the multi-resistant bacterial infections like MRSA, and P. aeruginosa. This study is focused on the candidal infections that are increasing worldwide.7

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Prevention of restenosis following choanal atresia repair. Description of new stent


Several surgical approaches for the repair of congenital choanal atresia have been described since its first correction by Emmert in 1854.1 Stents are usually inserted in both nostrils following surgical repair to prevent the occurrence of postoperative stenosis.2 However, there is no standard stent used, and all stents have to be fashioned at the time of surgery from soft, and hard materials. However, the most common is the preformed plain endotracheal tube.3 Alternatives to stenting are serial dilation of the choanae once a week for 4-6 weeks, or regular bougienage every 2 months.

There are several problems associated with the current methods of preventing recurrence of stenosis. This may explain the high incidence of restenosis, which may reach 80%. Stents made of polyvinyl chloride (PVC) soften at body temperature, and may collapse under outside pressure.4 Repeated anesthetics may unnecessarily subject the newborn to the hazards of anesthesia, and tracheal intubation. Those stents made of rubber or PVC may also induce localized tissue reaction. After the success of using a stent made of reinforced...
the presence of the attached piece of sponge to the bridge is likely to prevent pressure necrosis of the columella. Finally, this tube is produced from material previously tested, and licensed for use in humans (Z79-IT). This means that its presence in direct contact with mucous membranes for long periods does not initiate inflammatory toxic tissue reaction, which eventually results in scar tissue formation and possible restenosis. The tube sizes are 3, 3.5, 4, 4.5, and 5 mm internal diameter; the smallest size is for the neonate.

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References


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Efficacy of endorectal ultrasonography in preoperative staging of rectal carcinoma

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The most important factor in deciding on the surgical approach in patients with rectal cancer is the tumor stage. Local excision with curative intent, and subsequent prevention of permanent colostomy, could be performed for early rectal cancers (T1N0 and T2N0) that are less than 4 cm in diameter, those that involve less than 40% of the rectal wall circumference, and are located within 6 cm of the anal verge, with no evidence of nodal disease on preoperative evaluations (for example, endorectal sonography).
sonography has been shown to be an accurate, and easy imaging modality in determining the depth of tumor invasion in rectal cancer. Each layer of rectal wall can be identified, and its penetration by cancer described. Although lymph nodes can be visualized by ultrasonography, the presence of cancer within these nodes cannot be accurately predicted, as many visible nodes in sonography may be reactive rather than neoplastic. We designed this study to evaluate the accuracy of endorectal sonography in preoperative staging of rectal cancers.

From September 2002 to December 2003, 17 patients (9 males and 8 females) aged 32-67 years (mean age of 58) who were scheduled for neoadjuvant therapy, radical resection, or local excision underwent endorectal ultrasound (EUS) using an 180° (Pie medical-scanner 260). All the patients had preoperative biopsy proven diagnosis of carcinoma of the rectum. The EUS studies were performed 2-7 days prior to the operation. For each patient, tumor dimensions, and depth of mural penetration was assessed. Ultrasonographic staging (UT) was performed using the method described by Hildebrandt and Feifel. All the patients were operated, and the resected specimens were sent for pathological assessment. The tumors were classified using the tumor node metastasis (TNM) staging method. The TNM stages of the tumors obtained by EUS, and histopathological examination were compared using the student t-test. Statistical analysis was carried out using the student t-test, and p<0.05 were considered significant.

The tumors were recorded sonographically, T1 in 11 patients, T2 in 4, and T3 in 2 patients (Table 1). Pathology reports compared to the endorectal ultrasound results are also shown in Table 1. According to the EUS, 4 patients with the stage of T3 had positive lymph nodes, however, in pathological examination, 9 patients had positive lymph nodes. Overall accuracy in staging depth of infiltration was 85%. Overstaging occurred in 0% of patients, whereas understaging occurred in 17.6%.

For rectal cancer, the decisions regarding neoadjuvant therapy, radical resection, or local excision depends on accurate preoperative staging. Multiple modalities have been suggested, and are now available to stage rectal cancer. The most important modalities are digital rectal examination, computed tomography (CT), magnetic resonance imaging (MRI), and EUS. Digital rectal examination accuracy varies from 50-88% for depth of penetration. Accuracy of CT varies from 60-94% for depth of penetration, and from 54-70% for lymph node metastases. Accuracy of MRI varies from 66-92% for depth of penetration and from 60-90% for lymph node metastases.

Ultrasonography became useful in rectal pathology by endoluminal probes. In this manner, endorectal ultrasound or endoscopic ultrasound was performed. The depth of invasion of rectal cancer, known to be an important variable in deciding on the method of treatment, can be accurately determined by endoluminal sonography. Endorectal ultrasound varies from 62-92% for depth of penetration, and from 64-88% for lymph node metastases. In our study, the accuracy of EUS for staging was 85%. This result may be obtained as most of our patients were in stage 3. Most recent studies have obtained similar results to our study. Herzog et al performed a thorough study on the accuracy of EUS in staging of rectal tumors (early stages such as T1N0 or T2N0). He obtained an overall accuracy in staging depth of infiltration of 89%. Overstaging occurred in 10.2%, and understaging in 8.8%. Tumors of the lower rectum were incorrectly staged in 16.7%, whereas tumors of the middle, and upper rectum had an incorrect staging in 6.3% (p<0.001).

The EUS has good accuracy in staging; however, like all radiology instruments they have overstaging and understaging. A disadvantage of EUS is the inconsistenc in discriminating deep intramural (T4) extensions from early, focally, or microscopically transmural (T3) penetration. Another disadvantage of EUS is the low accuracy rate in diagnosing metastatic lymph nodes. An MRI, with the use of an endorectal coil may have a slightly higher accuracy for detecting lymph nodes.

Comparing preoperative transrectal ultrasound, and CT staging in 89 consecutive patients has shown that sonography is superior to CT scan in assessment of tumor extent, and in detection of lymph node involvement. Kim et al found that endorectal sonography had an accuracy of 81.1%, a sensitivity of 53.3%, and a specificity of 75% in preoperative staging of rectal carcinoma whereas for

### Table 1 - Pooled results of T-staging

<table>
<thead>
<tr>
<th>Staging by endorectal sonography</th>
<th>Pathological staging</th>
<th>T1</th>
<th>T2</th>
<th>T3</th>
<th>T4</th>
<th>Acc (%)</th>
<th>Os (%)</th>
<th>Us (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>(85)</td>
<td>(0)</td>
<td>(17.6)</td>
</tr>
<tr>
<td>T2</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T3</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Acc - accuracy, Os - overstaged, Us - understaged
Oxidative stress in patients with premature hair grayness

Khalifa E. Sharqie, MBChB, PhD, Kismat M. Turk, BSc, PhD, Ahmed R. Abu-Raghi, MBChB, PhD, Hala G. Al-Geboori, BSc, MSc.

Grayness of hair is usually a manifestation of the aging process, and is due to progressive reduction in melanocyte function. Premature grayness of hair (PGH) has been defined as onset of grayness before 20 years of age in Caucasoid, 25 years of age in Asian and 30 years of age in Negro. The PGH is considered to be a variant of vitiligo that could be seen together or separately.

The PGH is considered to be a variant of vitiligo and is due to progressive reduction in melanocyte function. Premature grayness of hair (PGH) has been defined as onset of grayness before 20 years of age in Caucasoid, 25 years of age in Asian and 30 years of age in Negro. The PGH is considered to be a variant of vitiligo that could be seen together or separately.
Oxidative stress in premature hair graying

Table 1 - Oxidative stress parameters in chronic PGH in comparison with acute PGH and healthy controls.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Acute PGH (3 months - 2 years)</th>
<th>Chronic PGH (more than 10 years)</th>
<th>Control</th>
<th>Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malondialdehyde</td>
<td>2.11 ± 0.914*</td>
<td>1.27 ± 0.516†</td>
<td>1.18 ± 0.107</td>
<td>2.02 ± 0.947‡</td>
</tr>
<tr>
<td>Glutathione</td>
<td>0.52 ± 0.244*</td>
<td>0.84 ± 0.311†</td>
<td>0.85 ± 0.311</td>
<td>0.58 ± 0.482‡</td>
</tr>
<tr>
<td>Caeruloplasmin</td>
<td>29.38 ± 3.733**</td>
<td>27.11 ± 3.65†</td>
<td>26.93 ± 3.71</td>
<td>28.65 ± 3.57‡</td>
</tr>
<tr>
<td>Zinc</td>
<td>79.75 ± 3.63**</td>
<td>80.25 ± 3.21†</td>
<td>81.82 ± 3.63</td>
<td>79.90 ± 2.83‡</td>
</tr>
<tr>
<td>Copper</td>
<td>83.90 ± 2.29**</td>
<td>83.32 ± 2.18†</td>
<td>82.52 ± 2.10</td>
<td>83.68 ± 2.52‡</td>
</tr>
</tbody>
</table>

‡ - p-value in patients in comparison with control (p<0.05), * - p-value in chronic PGH (21 patients) in comparison with acute PGH (15 patients) (p<0.05), ** - p-value in chronic PGH (21 patients) in comparison with acute PGH (15 patients) (not significant), † - p-value in chronic PGH (21 patients) in comparison with control (not significant),

PGH - premature grayness of hair.

with the duration of PGH, serum MDA (p<0.001), and caeruloplasmin (p<0.001) had a statistically significant negative correlation while serum glutathione levels showed a statistically significant positive correlation (p<0.05). Other parameters showed no significant correlation with duration. When oxidative stress parameters in patients with acute PGH (15 patients) were compared to that of chronic PGH (21 patients) MDA were significantly higher in acute PGH, glutathione were significantly lower in acute PGH. Other parameters (zinc, caeruloplasmin, and copper) showed no significant difference between acute, and chronic PGH. When oxidative stress parameters in patients with chronic PGH were compared to that of healthy control, there is no statistically significant difference in all parameters.

The PGH is a variant of vitiligo, and many biochemical changes (for example, elevated glycosylated Hb, and abnormal lipoproteins) that occur in vitiligo can occur in PGH. Free radicals damage, and decreased antioxidants were reported in vitiligo. These observation had encouraged us to conduct the present work. The present study showed that: MDA level (which reflect free radicals damage) was raised in mild PGH, and gradually decreased especially in severe grayness, also MDA level was high in early PGH, while it gradually declined as the grayness become chronic, and these finding were similarly reported in patients with vitiligo. On contrary, antioxidant glutathione were low in early, and mild cases of PGH, and gradually raised to reach a normal level in chronic, and severe cases of PGH. Caeruloplasmin level were high in early cases of PGH, and gradually declined in chronic cases of PGH (reaching the level of healthy controls). These interesting results had been also reported in patients with vitiligo.

In conclusion, the changes in free radicals damage, and antioxidants were comparable in patients with vitiligo, and PGH. Also these findings do confirm that the etiopathogenesis of vitiligo, and PGH is similar.

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