THYMOMATOUS VERSUS NONTHYMOMATOUS MYASTHENIA GRAVIS, A COMPARATIVE STUDY

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ABSTRACT
Myasthenia gravis (MG) is a known potentially debilitating, and life threatening disease, for which thymectomy is considered the optimal treatment. Ten to twenty percent of patients are found to have thymomas, which reflects its presence in a different clinical presentation, more severe disease state and worse response to surgery. The aim of this study is to compare between thymomatous and nonthymomatous MG. The study included 63 patients of myasthenia gravis for whom thymectomy was performed. They were divided into two groups, Group 1 of 51 patients with nonthymomatous MG, and Group 2 of 12 patients with thymomatous MG. The mean age of group 1 was 27.6 years while that for group 2 was 48.3 years (P.value 0.003). The female to male ratio in group 1 was 2.9:1 and that of group 2 was 1:2 (P.value 0.001). There was no difference in the symptomatology or duration of illness between the two groups. Group 2 patients needed more medications than those of group 1 (P.value 0.01). Group 1 patients were mainly in a moderately severe disease grade (mainly grade IIA, IIB, and III) while those of group 2 were in an advanced disease grade (IIB, III, and IV) (P.value 0.001). Extended thymectomy was performed for all the patients with good prognosis in group 1 patients (51% remission, 45.1% benefited, and 3.9% unchanged) and worse prognosis in group 2 patients (no remission, 50% benefited, and 50% unchanged or worse) (P.value 0.001). We concluded that thymomatous MG is markedly different from nonthymomatous MG with older age presentation, more in men, appears in an
advanced disease state, and responds worse to thymectomy. Radical en block extended thymectomy with postoperative radiotherapy is essential for better survival and to safeguard against recurrence.

INTRODUCTION

-Myasthenia Gravis (MG) is an autoimmune disease in which the thymus gland is thought to play a central role in the pathogenesis (1). The basic problem involves blockade, accelerated degradation, or complement related damage to post synaptic nicotinic acetylcholine receptors (ACHR) of voluntary muscles, resulting in impaired neuromuscular transmission (2). The decreased number of ACHR results in end plate potentials of diminished amplitude, which fails to trigger action potentials in some muscle fibers, and when this occurs at many junctions, the power of the whole muscle is reduced, which is clinically manifested as fatigue and weakness (3). The weakness tends to increase with repeated activity and improves with rest. The symptoms are limited to the motor system without loss of reflexes or alteration of sensation or coordination (3).

-Four methods of treatment are currently used for myasthenia gravis either separately or in combinations, Anticholineesterase drugs to enhance neuromuscular transmission, steroids, and immunosuppressive drugs to reduce the immune response, plasmapheresis to remove some of the circulating auto-antibodies, and thymectomy to remove a major source of antibody production (2).

-Thymectomy is now considered the standard therapy for achieving a prolonged and sustained improvement in most patients with myasthenia gravis (4).

However, there is a certain group of patients with myasthenia gravis in whom a thymic tumor (thymoma) is present. Approximately 10 to 20% of patients with myasthenia gravis are found to have thymomas, whereas about 30 to 50% of thymomas are associated with clinical myasthenia gravis (5).

-Although thymectomy has been proved to be an effective mode of treatment for myasthenic patients in general, yet it was found to be less effective in thymomatous than in nonthymomatous myasthenia gravis (6).
The aim of this study is to compare between thymomatous and non-thymomatous myasthenia gravis patients as regard their clinical and pathological features, and to analyze the different variables that may have an effect on the prognosis and outcome after thymectomy.

**PATIENTS AND METHODS**

This study was conducted at the Cardiothoracic Surgical Department, Mansoura University Hospital, throughout the period 1985-2001.

-The study included 63 patients with myasthenia gravis with or without thymoma for whom thymectomy was performed.

-Cases of apparently markedly invasive thymomas, cases of thymoma with distant metastases, and cases of thymoma without clinical or electromyographic findings of myasthenia gravis were excluded from this comparative study.

-The patients were divided into two groups: Group 1, consisted of 51 patient (80.9%) with non-thymomatous M.G; and Group 2 consisted of 12 patients (19.5%) with thymomatous M.G.

-The age of the group I patients ranged between 8 and 45 years with a mean age of 27.6 ± 3.8 years, while that of the group 2 patients ranged between 35 and 65 years with a mean age of 48.3 ± 7.2 years.

-In group 1 patients there were 38 female (74.5%) and 13 male (25.5%) with female to male ratio of 2.9 : 1, while in group 2 patients there were 4 females (33.3 %) and 8 males (66.7 %), with a female to male ratio of 1:2.

-Ptosis was the most frequent presenting symptom as it occurred in 45 patients (71.4%), followed by easy fatigability that occurred in 39 patient (61.9%). Dysphagia, dysarthria, and dysphonia were present in 5 patients (7.9%). Three patients (4.8%) presented with severe respiratory failure necessitating artificial ventilation. There was no marked difference in the symptomatology of the two groups of myasthenia gravis.

-A variable period of time elapsed between the onset of the symptoms and the referral to surgery. This period ranged between 2 months and 6 years with a mean of 18 months. There was one patient in the thymomatous group who had a history of transcervi-
cal thymectomy for MG. two years ago, otherwise, there were no marked difference in the duration of symptoms before surgery between the two groups.

- All patients (100%) were on anticholinesterase drugs for a period between 2 months and 2 years, 39 patients (61.9%) were on corticosteroids for a period between 2 months and 2 years, 17 patients (17.5%) needed preoperative plasmapharesis between 3 and 6 sessions, 6 patients (9.5%) needed preoperative sandoglobulin between 6 and 12 vials, and 3 patients (4.8%) needed ventilatory support for one to two weeks preoperatively.

- Plain chest x-ray films done for all the patients in posteroanterior and lateral views showed broad anterosuperior mediastinum in 11 cases (17.5%), and was reported as free in the other 52 patients (82.5%).

- CT scan of the chest was done for 51 patients, and it was free in 35 of them (68.6%), showed enlarged thymus gland in 8 patients (15.7%), and thymic mass in 8 patients (15.7%). CT guided needle biopsy was taken from all the 8 patients with thymic masses and pathological examination revealed them to be thymomas.

- Electromyography was performed for 34 patients, and it was positive in 23 of them (67.6%). Fatigue test using supra-maximal repetitive stimulation of the right ulnar nerve was done in 34 patient, and it was positive in 23 (67.6%). Fatigue test of the right hypothenar muscles using concentric needle electrodes was also done for the same 34 patients, and it was positive in 23 (67.6%).

- The diagnosis of myasthenia gravis in both groups was established on the basis of history, clinical physical findings, and positive response to the anticholinesterase drugs. Electromyography and fatigue test confirmed the diagnosis when they were positive. CT scan of the chest and CT guided needle biopsy diagnosed 8 patients as having a thymoma which seemed to be operable on radiological basis.

- The clinical severity of myasthenia gravis was graded according to the modified Osserman classification as described by Donias 2001 (3). Grade I: ocular involvement only (4 patients, 6.3%, all from group 1),
Grade II A : mild generalized disease with good response to drug therapy and no respiratory muscles affection (17 patients, 27%, all from group 1), Grade II B : moderate generalized skeletal and bulbar muscles involvement with less satisfactory response to drug therapy, but still no respiratory muscles affection (19 patients, 30.2%, three of them from group 2), Grade III : severe generalized skeletal and bulbar muscles involvement and respiratory muscles weakness with poor response to drug therapy (17 patients, 27%, four of them from group 2), and Grade IV : late and severe form of muscle weakness with no response to drug therapy or a crisis with life threatening impairment of respiration (6 patients, 9.5%, five of them from group 2).

In all instances, extended thymectomy was performed through a standard median sternotomy. The entire thymus gland with the cervical stalks and all the anterior mediastinal fat and soft tissue from phrenic nerve to phrenic nerve were completely excised. No attempt was made to include fat or lymphatic tissue lateral to thymic cervical pedicle where the vagus and recurrent laryngeal nerves and other structures are vulnerable to injury. Both pleural envelopes were opened to allow meticulous dissection of all contiguous fat and any suspicious tissue that might contain islands of aberrant thymus. In three instances there was macroscopic invasion of the mediastinal fat and pleura which was excised en bloc. In one case invasion of the parietal pericardium was encountered which was also excised with a safety margin, and in one case there was macroscopic invasion of the anterior segment of the right upper lung lobe for which a wedge resection was done. Meticulous haemostasis was performed and wound closed in layers after insertion of mediastinal and pleural underwater seal tube drains.

-Forty nine patients (77.8%) were extubated after thymectomy, either immediately or within few hours in the ICU. The other 14 patients (22.2%) needed ventilatory support for some time; five of them (7.9%) were ventilated for less than 3 days and were weaned off smoothly, and another 7 patients (11.1%) were ventilated for a period between 4 and 9 days and tracheostomy was done for them. The other two patients (3.2%) needed prolonged ventilation, one for 17 days and the other for 45 days, tracheostomy.
was done for them and ultimately all the nine patients (14.3%) were weaned off ventilation and tracheostomy closed. Minor complications as wound infection, atelectasis, or pneumonia were dealt with satisfactorily, and there was no hospital mortality in all of our cases.

-All the resected thymus glands, mediastinal fat, and other excised tissues were sent for pathological examination that revealed 32 patients (50.8%) to have thymic hyperplasia, 6 patients (9.5%) to have involuted atrophic thymus, 13 patient (20.6%) to have normal thymus with non specific changes, and 12 patients (19.1%) to have thymoma, eight of them were diagnosed preoperatively.

-The thymomas were classified according to Masaoka and coworkers 1981(7) into: Stage I: macroscopically completely encapsulated and microscopically no capsular invasion, (4 patients 33.3%), Stage II A: microscopic invasion into surrounding fatty tissue or mediastinal pleural tissue (3 patients, 25%), Stage II B: microscopic invasion into capsule (3 patients, 25%), Stage III: macroscopic invasion into neighbouring organ (pericardium, great vessels or lung) (2 patients, 16.7%), Stage IV A: pleural or pericardial dissemination (none, 0%), and Stage IV B: lymphogenous or haematogenous metastases (none, 0%).

-All the patients were followed up monthly at the outpatient clinic for three months, then every three months for the first year, and yearly after. The follow up period of our patients ranged between 3 months and 15 year with a mean follow up period of 7.5 years.

The response to surgery was recorded at the last check up visit, and the patients were classified by a modified Osserman's classification as stated by Hassantash. et al. 1996 (8) and that of Milicic and Dodge as stated by Nieto et al 1999 (9) as follows: A: complete remission for more than 90 days, B: markedly improved, symptom free on decreased dose of medication, C: improved clinically with no change of medication, D: unchanged with no clinical improvement on same dose of medication, and E: clinically worse.

**STATISTICAL ANALYSIS**

Data were analyzed statistically
using the statistical package for social science pogrom (SPSS). Student t-test was used to compare the two groups of patients. Chi-square test and X-square test were used to study the relationship between each different variant and the postoperative outcome of patients. Functional outcome and survival of patients were studied using the Kaplan-Meir method. P. value was considered significant when less than 0.05 and highly significant when less than 0.01.

RESULTS

The results of our study are shown in the following tables with comparison between the non-thymomatous patients (group 1) and the thymomatous patients. (group 2).

Throughout the follow up period, 3 patients of the nonthymomatous group (5.9%) died (one in an accident and the other two due to disease unrelated to M.G.), and they were all known to be in complete remission. In the thymomatous group, 3 patients (25%) died (two due to recurrence of thymoma after one and two years respectively, and the third one due to emergence of myasthenia gravis crisis, 4 years after surgery, and the patient could not be rescued). All the three patients were in stage D postoperatively. Another 2 patients died from ischemic heart disease.

The statistical analysis for the post operative survival was highly significant (P. value 0.001) as 94.1% of the first group were alive at the end of follow up period versus 58.3% of the second group.

-Analysis of the clinical and functional outcome of the patients revealed that 51% of the nonthymomatous group were in complete remission, 45.1. benefited from surgery, while only 3.9% were unchanged. On other hand there was no complete remission in the thymomatous patients, 50% has benefited from surgery, and 50% were unchanged or worse, this was highly significant (P. value 0.001).
Table 1: Age of the Patients in Years.

<table>
<thead>
<tr>
<th>Age</th>
<th>Group 1 (51)</th>
<th>Group 2 (12)</th>
<th>P. value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>8-45</td>
<td>35-65</td>
<td>0.003</td>
</tr>
<tr>
<td>Mean</td>
<td>27.6 ± 3.8</td>
<td>48.3 ± 7.2</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Sex of the Patients.

<table>
<thead>
<tr>
<th>Sex</th>
<th>Group 1 (51)</th>
<th>Group 2 (12)</th>
<th>P. value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>38 74.5%</td>
<td>4 33.3%</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>13 25.5%</td>
<td>8 66.7%</td>
<td>0.001</td>
</tr>
<tr>
<td>Ratio</td>
<td>2.9:1</td>
<td>1:2</td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Preoperative Duration of Symptom.

<table>
<thead>
<tr>
<th>Years</th>
<th>Group 1 (51)</th>
<th>Group 2 (12)</th>
<th>P. value</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1 year</td>
<td>13 25.5%</td>
<td>5 41.7%</td>
<td></td>
</tr>
<tr>
<td>1-2 years</td>
<td>22 43.1%</td>
<td>4 33.3%</td>
<td>N.S</td>
</tr>
<tr>
<td>&gt; 2 years</td>
<td>16 31.4%</td>
<td>3 25%</td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Preoperative Medications.

<table>
<thead>
<tr>
<th>A. Ch.E.</th>
<th>Total</th>
<th>Group 1 (51)</th>
<th>Group 2 (12)</th>
<th>P. value</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ C.</td>
<td>63 100%</td>
<td>51</td>
<td>12</td>
<td>N.S.</td>
</tr>
<tr>
<td>+ p.ph.</td>
<td>39 61.9%</td>
<td>30</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>+ S.G.</td>
<td>11 17.5%</td>
<td>6</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>+ V.</td>
<td>6 9.5%</td>
<td>2</td>
<td>4</td>
<td>0.01</td>
</tr>
</tbody>
</table>

### Table 5: Preoperative Disease Severity According To Modified Osserman's Classification.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Total</th>
<th>Group 1 (51)</th>
<th>Group 2 (12)</th>
<th>P. value</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>6.3%</td>
<td>4 7.8%</td>
<td>0 0%</td>
<td></td>
</tr>
<tr>
<td>IIA</td>
<td>27%</td>
<td>17 33.3%</td>
<td>0 0%</td>
<td></td>
</tr>
<tr>
<td>IIB</td>
<td>302%</td>
<td>19 31.4%</td>
<td>3 25%</td>
<td>0.001</td>
</tr>
<tr>
<td>III</td>
<td>27%</td>
<td>17 25.5%</td>
<td>4 33.3%</td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>9.5%</td>
<td>6 2%</td>
<td>5 41.7%</td>
<td></td>
</tr>
</tbody>
</table>

### Table 6: Post Operative Outcome.
According to Milicoat and Dodge Classification.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Group 1 (51)</th>
<th>Group 2 (12)</th>
<th>P. value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: complete remission</td>
<td>26 51.0%</td>
<td>0 0%</td>
<td></td>
</tr>
<tr>
<td>B: markedly improved</td>
<td>14 27.5%</td>
<td>2 16.7%</td>
<td></td>
</tr>
<tr>
<td>C: improved</td>
<td>9 17.6%</td>
<td>4 33.3%</td>
<td>0.001</td>
</tr>
<tr>
<td>D: unchanged</td>
<td>2 3.9%</td>
<td>5 41.07%</td>
<td></td>
</tr>
<tr>
<td>E: worse</td>
<td>0 0%</td>
<td>1 8.3%</td>
<td></td>
</tr>
</tbody>
</table>
DISCUSSION

Myasthenia gravis (MG) is a known potentially debilitating, and life threatening illness despite progress in therapy. The benefits of thymectomy as part of the treatment of MG has been well documented repeatedly since the initial observation of Blalock and associates at 1939 (10). However, there is a certain group of myasthenia gravis patients who are associated with thymomas that present special clinical features. (4,5).

The presence of the tumor is usually reflected by marked difference in the clinical presentation, disease severity, functional improvement after surgery, and morbidity and mortality. Many authors have emphasized the heterogeneous nature of myasthenia gravis as related to pathologic, demographic and immunologic findings, and stressed the need to differentiate thymomatous MG from nonthymomatous MG. (9,11-13). We agree with this opinion as our study had shown marked differences between the two groups of patients.

It is well known that thymomas are often found in patients with MG, and the reported incidence of thymoma in MG patients ranges from 10 to 42% (5,6,12). In our series thymomas were found in 19.1% of cases. Also the incidence of MG in thymomas is known to be in the range of 30 to 50% (2,6,12). In our series clinical manifestations of MG were found in 12 patients (who were included in the study) out of 29 cases of thymoma seen throughout the period of the study (41.4%).

It has been stated that there is a biphasic mode of distribution for myasthenia gravis with one peak in the second and third decades affecting mostly women and not associated with thymoma, and another peak in the sixth and seventh decades affecting mostly men and is often associated with thymoma (3,5,9,12). This was our same finding as the mean age of our nonthymomatous group was 27.6 years while that for the thymomatous group was 48.3 years (Table 1), which was highly significant (P.value 0.003). Our study also revealed that patients younger than 30 years of age had benefited from thymectomy better than those older than 30 years, a result comparable to that of other authors (4,10,11). There was no case of thymoma under the age of thirty in our series, same finding reported by others (10,12).
It is well known that women are affected twice to thrice as often as men (2,3,5), however, when thymoma is there, this is reversed, as males are affected with thymomatous MG more than females (9,11,12). The female to male ratio in our nonthymomatous patients was 2.9:1 while that for the thymomatous group was reversed into 1:2, a highly significant result with P. value of 0.001 (Table 2).

Female patients were found to have better prognosis in general than males in our series and that of others (2,12), and this is explained by the fact that most of the males are of the older age group with more severe clinical stage, and many of them are having thymoma with its less favorable prognosis.

There was no marked difference in the symptomatology of patients between the two groups of thymomatous and nonthymomatous MG. This happened because most of our cases with thymoma were in an early neoplastic stage (7 patients in Masaoka stage I and II,2 in stage III and none in stage IV), thus, the presentation was that of the myasthenia gravis only rather than that of the tumor.

There was also no marked statistical difference between the two groups as regard the preoperative duration of symptoms (Table 3) for the same reason mentioned before. However, the patients having shorter duration of symptoms (less than 1 year) were found to get better response to surgery than those with longer duration of symptoms (more than 2 years). This finding was also mentioned by other authors (4,6,8,9,14,15) who explained this on the basis of progressive and presumably irreversible muscle atrophy with long standing myasthenia, and that thymectomy arrests the progress of the disease even if it fails to induce remission, so that early operation would reduce the number of patients developing the more severe form of myasthenia.

The statistical difference between the two groups of patients as regard the amount and type of preoperative medication was non significant in the patients receiving anticholinesterase drugs or corticosteroids, while the statistical difference was highly significant (P. value 0.01) in those who were having plasmapharesis or sandoglobulin, or needed artificial ventilation (Table 4), denoting the severer clinical course of the thymomatous patients. This finding and explanation
was also mentioned by many other authors (1,9,11,15).

Many authors (3,4,8-10) had shown a close relationship between the preoperative Osserman, disease stage and postoperative outcome with those in the lower classes having better prognosis than those in higher classes, with a much likelihood of complete remission or improvement. It was interesting to find a highly significant difference (P. value 0.001) in the disease severity according to Osserman's classification between the thymomatous and nonthymomatous MG as 75% of the patients in group 2 were in class III or IV, 25% in class II B, and none in I or II A, while most of the group I patients were in class II A or II B. (Table 5) and accordingly, group 2 patients were found to have much worse prognosis than that for group I patients.

It is now generally accepted that thymectomy is the preferred option of treatment for most of myasthenia gravis patients, yet controversies about route of surgery and extent to which tissues adjacent to the thymus that may contain aberrant thymic tissue should be excised are there (2-4). Different surgical approaches have been proposed including simple transcervical thymectomy, simple transsternal thymectomy, extended transsternal thymectomy, and maximal en block thymectomy via a combined transcervical transsternal approach (1,3,4).

Other new modalities of thymectomy have been recently proposed like partial upper sternal splitting incision (4), reversed T upper ministernotomy (3,16), and video assisted thymectomy (3,17). Any one of these procedures can be accepted under special circumstances for management of nonthymomatous MG, but when thymoma is suspected or found, nothing less than en block extended or maximal radical thymectomy is accepted (2,4-6,10-12,14,18-21).

It has been stressed that when the thymus gland appears to be unusually firm or is adherent to any of the surrounding structures, the surgeon should be highly suspicious that a thymoma is present and infiltration into surrounding structures must be searched for carefully, because this is the major criterion for malignancy (6,12,18,21).

We share those investigators the objectives of removing all of the thym-
ic tissue, and believe this can be most safely and consistently accomplished by extended thymectomy via median sternotomy alone with radical exploration and excision of contiguous tissues in the root of the neck up to the lower pole of the thyroid gland, total excision of all the fat in the anterior mediastinum from phrenic nerve to phrenic nerve, as well as opening of both pleurae with excision of all visible mediastinal fat.

There is a peculiar phenomenon characteristic for thymoma which has been stated by many authors (6,12,13,15,19-21), that is the liability of these tumors to recur, even after complete radical en block excision. This was the reason for many authors (22,23) to lay stress on postoperative radiotherapy or combination of multi modality treatment, even for the apparently non invasive thymoma. It was our routine to refer cases that proved to be thymomatous for postoperative irradiation, and however two cases had developed recurrence of thymoma 1 and 2 years after resection.

Analysis of the functional outcome of the patients after thymectomy has revealed 51% of the group 1 patients to have complete remission, 45.1% to be improved either markedly or moderately, and only 3.9% to be unchanged, while in the group 2 patients there was no complete remission, 50% had improved, and 50% remained unchanged or deteriorated. These figures were statistically highly significant (P.value 0.001) denoting the markedly unfavorable prognosis of thymomatous M.G. These results coop with those of others (1,2,4-6,8,10,12-14) who reported that the presence of thymoma decreases the probability that thymectomy and removal of the thymoma will help the patients myasthenic symptoms, and that patients with thymomatous MG present worse results in term of functional improvement after surgery. These authors also have attributed this bad outcome to the myasthenia gravis state rather than the neoplastic potentials of the tumor as they usually occur in older age group and mostly present in a higher class of disease severity.

Throughout the follow up period, there was 3 mortalities in the non thymomatous group with an actuarial survival at 1, 5, and 10 years of 100%, 96.1%, and 94% respectively. The cause of death in these 3 cases was...
unrelated to the disease. In the thymomatous group 3 patients died because of the original disease (myasthenia gravis or the thymoma) and another two patients died because of unrelated cause. The actuarial survival in this group for 1, 5, and 10 years was 91.6%, 75%, and 58.3% respectively. The statistical difference in survival for the two groups was non-significant for the first year, but it became highly significant at 5 and 10 years (P.value 0.01) and this difference is related mainly to the malignant potentials of the tumor (recurrence or new emergence of myasthenia gravis after improvement) as have been proved by many authors (1,5-7,12,14,18-21).

CONCLUSION

From this study we conclude that thymomatous MG is a special entity that differs markedly from the nonthymomatous type as regard its clinical presentation (age, sex, disease severity, and amount of preoperative medication). The response to thymectomy in thymomatous MG is much worse than that for the nonthymomatous type which necessitates separation, of both types.

Thymoma should be suspected in older group of patients particularly males, who present with an advanced severe stage of myasthenia gravis. Every effort should be done to identify those patients as more aggressive resection is needed in them in contrast to more simple procedures that may suffice in the nonthymomatous patients.

When thymoma is known to be there, suspected, or found intraoperatively, nothing less than radical en bloc extended or maximal thymectomy is enough. This is to be supplemented with post operative adjuvant irradiation to safeguard against recurrence.

REFERENCE


مرض ونوع العضلات: المصحوب وغير المصحوب بأورام
الغدة الشيموسية - دراسة مقارنة

ـ. عابد عبد السميع موافي
قسم جراحة القلب والصدر - كلية طب المنصورة

من المعروف أن مرض ونوع العضلات يعتبر من الأمراض ذات القدرة على إضفاء المريض وتهديد حياته. ولذا فإن استئصال الغدة الشيموسية يعتبر هو العلاج المثالي.

وقد وجد أن 10/1 إلى 20/1 من المرضى يكون عددهم أورام بالغدة الشيموسية والتي ينعكس وجودها
في شكل إكلينيكي مختلف ودرجة أشد من المرض واستجابة سبيرة للجراحة.

وقد هدفت هذه الدراسة إلى المقارنة بين ونوع العضلات المصحوب وغير المصحوب بأورام الغدة
الشيموسية

وقد شملت الدراسة 63 مريضاً يعانون العضلات والذين أجريت لهم عملية استئصال للغدة الشيموسية.

وتم تقسيم المرضى إلى مجموعتين تكونت المجموعة الأولى من 51 مريضاً يعانون العضلات الغير
مصحوب بأورام الغدة الشيموسية والمجموعة الثانية من 12 مريضاً يعانون العضلات المصحوب بأورام
الغدة الشيموسية.

وكان متوسط عمر مرضى المجموعة الأولى 57.6 سنة بينما كان متوسط عمر مرضى المجموعة
الثانية 48.3 سنة مما كان له دلالة إحصائية.

وكانت نسبة الإناث إلى الذكور في المجموعة الأولى 2 إلى 1 بينما كانت النسبة في المجموعة
الثانية 1 إلى 2 مما كان له دلالة إحصائية.

ولم يكن هناك اختلاف في الأعراض المرضية أو مدة المرض بين المجموعتين. وقد احتاج مرضى
المجموعة الثانية إلى علاج دوائي أكثر من مرضى المجموعة الأولى مما كان له دلالة إحصائية.
وكان أغلب مرضى المجموعة الأولى في مرحلة متوسطة من المرض بينما كان مرضى المجموعة الثانية في مرحلة أكبر تقدماً من المرض مما كان له دلالة إحصائية.

وقد أجريت عملية استئصال عملي ممتد للغدة الليمفوسية لكل المرضى وكانت النتيجة جيدة لمرضى المجموعة الأولى (51% شفاء و 49% تحسن و 3.3% بدون تغيير) وسيئة لمرضى المجموعة الثانية (لا يوجد شفاء و 50% تحسن 5% بدون تغيير) مما كان له دلالة إحصائية.

وقد استخلص البحث أن حالات مرض وفق العناصر المصحوبة بتشذيب الغدة الليمفوسية تختلف اختلافاً كبيراً عن الحالات الغير مصحوبة بأورام حيث تزداد نسبتها في العمر الكبير وتكون أكثر في الرجال وتظهر في حالة متقدمة من المرض واستجابةها لاستئصال الغدة الليمفوسية سيئة.

وأن من الضروري إجراء عملية الاستئصال الكلى الممتد للغدة الليمفوسية مع العلاج الإشعاعي بعد الجراحة لهذه الحالات للحصول على نتيجة أحسن وفرة من إرداد الورم.