



SINDROME DI PARSONAGE TURNER O AMIOTROFIA NEVRALGICA (NA)

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NEURALGIC AMYOTROPHY THE SHOULDER-GIRDLE SYNDROME

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A SYNDROME comprising pain and flaccid paralysis of the muscles round the shoulder girdle occurred fairly often during the war years 1941-45, though previously it had been rare. We observed 136 cases during neurological work in the Army in the United Kingdom and in India Command.

The essential clinical picture is simple: without any constitutional disturbance pain starts suddenly across the top of the shoulder-blade and may radiate down the outer side of the upper arm or into the neck. This pain lasts from a few hours to a fortnight or more, and then a flaccid paralysis of some of the muscles of the shoulder girdle and often of the arm develops, and in some cases there is a patch of numbness over the outer side of the upper arm. When the paralysis appears, the severe pain usually stops, but a dull ache may persist considerably longer. This clinical picture is subject to modifications.

Remarkably little was published about this condition before 1942. Some cases of serratus-magnus palsy developing after operations or after injections are recorded (Bramwell and Stauffers 1903), but most of the serratus-magnus palsies were traumatic in origin. The standard neurological textbooks (Gowers 1892, Albutt and Rolleston 1910, Oppenheim 1911, Hasler 1926, Kinney Wilson 1940) do not describe the condition beyond stating that a toxic neuritis of the long thoracic nerve, and sometimes of the circumflex nerve, may occur after infections such as typhoid and pneumonic. Russell Brain (1940), under the heading "spinal neuritis," describes the condition as it affects the fifth and sixth cervical nerves, and ascribes it to an interstitial neuritis at the intervertebral foramina.

In England Richardson (1942) drew attention to the increased incidence of cases of serratus-magnus palsy, and of the 9 cases which he described only 1 could be ascribed to trauma, 1 followed pneumonia, and 1 glandular fever, and in 2 of the cases there was paresis of muscles of the shoulder girdle besides the serratus-magnus. Richardson's cases etc. in our opinion similar to those recorded here. Shortly afterwards, in the Middle East, Burnard and Fox (1942) described cases of "multiple neuritis of the shoulder girdle" of similar type, and Spillane (1943) analysed 46 cases of "localised neuritis of the shoulder girdle." An official (G.H.Q.) M.B.E. pamphlet (1943) described the condition under the name "infective neuritis," but included under this heading also cases of nerve lesions of the lower limb, which appear to us to differ from shoulder-girdle paralysis. In the United Kingdom one of us (Turner 1944) described, under the name "acute brachial radiculitis," 36 cases, which are included in the present series. The following case illustrates the clinical course.

An officer, aged 45, had a mastoid operation on Aug. 16, 1944, and eight days later, while in bed in hospital, unexpected severe pain across the top of the right shoulder-blade and down the outer side of the right arm to the elbow. The pain lasted about twenty-four hours and then stopped. Two days later he noted weakness of his right shoulder and muscles over the right side of the neck and outer side of the right arm. There were no constitutional symptoms at the onset of the pain or the paralysis.

During the next two months the power of the right arm gradually improved. He was examined by one of us 4 months after the onset, when he had moderate wasting, weakness of the right lower latissimus, spinal deltoid, lat and supinator longus, and there was winging of the scapula due to partial paralysis of the serratus-magnus, right biceps and supinator joints were flexible, the other arm normal. There was cutaneous sensory impairment C4 and C5 spinal segments on the right.

ANALYSIS OF THE CASES

The 136 patients included 3 civilians and 1 Serv. woman. There were 2 Indian sepoy in the series, other cases have also been seen in Indians, but sufficient details of these are not available for them to be included. The occurrence of the condition in Indians is of interest for poliomyelitis is very rare in the adult Indian (though common among European troops in India and an Indian children).

The age-incidence was as follows:

Age (yr.)	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60
No. of cases	2	3	11	21	21	21	21	2	2	2

The youngest patient was a boy of 15, who developed the condition after pneumonia, and the oldest was a 64. These figures for age-incidence reflect fairly accurately the age-groups in the Services and are probably of little significance.

The countries in which the patients were serving when the disease started were as follows:

Country	No. of cases	Country	No. of cases
United Kingdom	46	Algeria	2
India	37	Belgium	1
France	19	Denmark	1
Italy	9	China	1
M.F.F.	1	Ireland	1
North Africa	2	South Africa	1
East Africa	2		

The preponderance of cases in the United Kingdom in the India-Burma theatre was to be expected because we were working in these areas. The papers previously mentioned show that the condition was also common in the Middle East, and it is clear that the disease was widely distributed at any rate in the Eastern hemisphere.

PRECIPITATING CAUSES

A remarkable fact is that no less than 66 of the patients were in hospital with other conditions when shoulder-girdle syndrome started, and others had been recovered from illnesses. In 98 of the cases there was evidence of some precipitating factor:

Precipitating Cause	Cases	Precipitating Cause	Cases
Operations	17	Engelism	1
Hemorrhoidectomy	8	Malaria	1
Appendicectomy	1	Typhoid and malaria	1
Varicella	1	Typhoid	1
Blindfold cast	1	Tetanus	1
Miscellaneous	1	Intoxication	1
Trachea	10	Shingles	1
Spinal fluid removed for routine tests	5	Epididymitis	1
Minor local trauma	5	Rheumatic fever	1
Other operations	5	Chief infections	1
Earlier pneumonia	1	Septic infections	1
Atrophic rhinitis	1	Minor fevers	1
Antiglycylol treatment	1	Polymyositis	1
Strabismic squint	2	Mononuclear polyarthritis	1
Service overseas	1		

Operations

All the above-mentioned operations were relatively minor, and different anaesthetics were given—some intrathecal, some intravenous, and some spinal. One patient had received trichloroethylene in a closed circuit which is known to injure the nervous system (Humpal and McClelland 1944). In no case could the neurological condition have been due to a mechanical cause, such as pressure, for there was always a clear interval between the operation and the first symptoms of the shoulder-girdle syndrome—pain. The intervals were three days



PRESENTAZIONE CLINICA

- Dolore acuto (VAS 9/10) spalla-arto superiore, raramente bilaterale, costante, esacerbato dal movimento
- Dopo 1-2 settimane scomparsa dolore ed inizio ipostenia ed atrofia dei mm del cingolo scapolo-omerale da mononeurite multipla acuta del plesso brachiale:
 - m. Sovra-Sottospinato → n. Sovrascapolare
 - m. Dentato Anteriore → n. Toracico Lungo
 - m. Deltoide → n. Ascellare o Circonflesso
- Parestesia/ipoestesia nel 25% circa dei casi



EPIDEMIOLOGIA ED EZIOLOGIA

- Incidenza 2-3 casi/100000
- M/F 3:1 20 – 65 anni
- Idiopatica (infezioni, chirurgia, parto, vaccinazioni,traumi,linfomi,lupus. Disimmune?)
- HNA: 200 famiglie nel mondo.
Mutazione/alterazione del gene SEPT 9, braccio lungo Cromosoma 17. Quadro clinico non distinguibile da NA. Episodi ricorrenti. Esordio 20-30 anni. Ipotelorismo,epicanto,palatoschisi. Esiti più frequenti.



DIAGNOSI DIFFERENZIALE

- Radicolopatia cervicale C5-C6
- Patologie ortopediche della spalla (capsulite adesiva, borsite subacromiale, tendinite calcifica)
- Plessopatia carcinomatosa (s. di Pancoast)
- Lesioni del plesso brachiale
- S. dell' egresso toracico
- Nevralgia postherpetica
- Neuropatie da entrapment



DIAGNOSTICA STRUMENTALE

- RX Torace
- EMG-ENG (non prima di tre settimane dall'esordio)
- RM Cervicale
- RM Plesso Brachiale



TERAPIA

- Analgesia: -FANS

 - Steroidi (Prednisone 1 mg/Kg x 1 sett, graduale riduzione sino a sospensione nella II sett.)

 - Oppioidi

- FKT a dolore risolto



PROGNOSI

- Generalmente recupero in 6 – 12 sett (intolleranza a esercizio fisico)
- 80% recupero completo a 2 anni
- 90% recupero completo a 3 anni
- Rare le recidive omo/controlaterali con tempistica imprevedibile



SEGNALI CLINICI

- Dolore ad esordio acuto, a volte di notte, spalla-braccio, non avambraccio, esacerbato dai movimenti del braccio e non del capo
- Solo dolore x i primi 7 – 15 gg
- Scapola alata
- Assenza di traumatismi



GRAZIE PER L'ATTENZIONE

