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A CASE OF ARACHNIDISM BY *SEGESTRIA FLORENTINA* (ROSSI, 1790) (ARANEAE, SEGESTRIIDAE) IN SALENTO

RIASSUNTO

Viene segnalato un caso di aracnidismo causato da *Segestria florentina* su una donna del Salento, in Provincia di Lecce. Il morso di questo ragno ha provocato, a livello locale, acuto e persistente dolore ed edema della parte colpita, seguiti da parestesia della mano sinistra durata alcune ore. La sintomatologia consequenziale, sia locale che sistemica, si è risolta all'incirca in una settimana.

SUMMARY

A case of arachnidism produced in a woman by *Segestria florentina* has been reported from Leverano, a town near Lecce, Salento, South Italy.

At a local level, the bite provoked a keen and persistent pain and oedema of the part affected, followed by paresy of the left hand lasting some hours.

The consequent symptomatology, both local and systemic, disappeared in about a week.

INTRODUCTION

In nature all spiders are hunters and use many different and sophisticated strategies, the most effective of them being the production and injection of poison through their chelicerae, used to immobilize and kill their prey.

Man is only occasionally bitten, with a derived fear and confusion also among those who must to treat the situation.

In Italy a large majority of autochthonous spiders are inoffensive, and usually only a small number of them bite man causing, through its poison, a series of local, rarely systemic, symptoms.

The main symptoms can be, according to the composition of the toxin, cellular rupture and tissue death (at a local level) and neurotoxicity (on a general level).

The most well known Italian species which merit some importance from a medical point of view are *Latrodectus tredecimguttatus* (Rossi, 1790), *Loxosceles rufescens* (Dufour, 1820), *Cheiracanthium punctorium* (Villers, 1789) and *C. mildei* L. Koch, 1864 (BETTINI and BRIGNOLI, 1978; ORI, 1984; HANSEN, 1996; TRENTINI and MARINI, 1998; PEPE and TRENTINI, 2002).

These species are identified as dangerous for man; there are, too, less well-known spiders in Italy which may cause local effects and sometimes light systemic effects: a case in point is *Segestria florentina* (Rossi, 1790).

A case description

On the 19th November 2001, whilst busy with routine domestic chores on the balcony of her apartment, situated in the centre of Leverano (Lecce), Lucia G., 43 years old, became aware of an intense pain in the middle part of her left forearm.

She immediately realised that she had been bitten by “a large black spider”, and after shaking it to the ground, she squashed it with her shoe, killing it.

The bitten area caused an intense pain and within a few minutes the pain had spread to the entire left arm; 15 minutes later she experienced a rapid stiffening around the area bitten with paresis of the left arm (Mrs G. said she was unable to clinch her fist). Around the two puncture marks, point of entry of the poison, with a distance of about 5 mm from each other, a discolouration occurred (purple-red) with a diameter of 12 mm, which disappeared within a few hours (Fig. 1).



Fig. 1 - Swelling and reactive field in the seat of the bite. You can see two small holes on the internal site of left forearm, nearly seven hours after the bite. Photo: R. Pepe.

The evening of the same day, the left forearm showed oedema and hardening, and although the pain had lessened it had spread to the entire limb; moreover, there was a numbness throughout the limb (the patient managed to close her hand, although the attempt was tiring). General symptoms presented by the victim were: a high fever, an intense and persistent headache, a sense of fatigue throughout the body and dizziness which made walking difficult alone (she required assistance).

The symptoms as described remained unchanged for 24 h from the time of the accident and only on the third day a partial healing occurred.

Note must be taken that the victim, alarmed and afraid, presented herself at the emergency ward of the nearest state hospital “San Giuseppe da Copertino” in Copertino (LE), where the healthcare workers evaluated the case and not knowing the species of spider which was transported by the son of the victim for easy identification, they sent the woman to the Anti Venom Centre situated in the “Vito Fazzi” hospital in Lecce.

In the abovementioned centre, the victim was assured and calmed by the authors who immediately identified the species and outlined the probably course of events following a bite of this nature and its effects, a vial of cortisone was intravenously administered (Solu-medrol 1 gr.) together with rehydrite.

Then the patient was transferred to observation on the medicine ward of the same hospital for a period of three days and was treated intravenously with cortisone and antibiotics for three days; moreover she was treated with an injection of antitetanus. Following her improvement she returned home with this diagnosis: “the left forearm showed oedema by spider bite (*Segestria florentina*)”.

The patient continued to experience pain throughout the arm, even though to a far lesser degree, a mild persistent headache; both of which lasted for about a week.

Identification of the spider

The identification of the spider proved easy enough on the part of one the authors just by visually examining the remains which were presented, notwithstanding the bad condition thereof (Fig. 2) as it still maintained the morphological characteristics typical to the species and useful for its classification:

1. an example of a female spider;
2. black brown colour, typical of the species;



Fig. 2 - Female of *Segestria florentina* (Rossi, 1790), like report shown to the authors. Photo: R. Pepe.

3. fangs very long, with the basal part of the chelicerae having a dark metallic green colour;
4. a number of six simple eyes;
5. long, hairy and dark legs.

OBSERVATIONS

The female of *Segestria florentina* has a black pattern and size 14-25 mm (Fig. 3), while the male, which is very similar, is smaller (11-16 mm).

The opisthosoma is cylindrical shaped, and in the case of immature subjects or male subjects, some drawings on a lighter background can be observed.

The three couples of eyes are on two rows situated on the anterior part of the prosoma which has a cylindrical shape.

Its long and hairy legs can be brown or black coloured; another characteristic of this species regards the first three pairs of legs which are in restless position.

The appearance of the female is quite impressive, as it has chelicerae metal dark green coloured which are long and developed in the basic area (Fig. 4); if menaced, she shakes them.

The hole, the place where the species stays during the day, is a very narrow tunnel (diameter 1 cm, length 10-15 cm). At the entrance of this tunnel, the species puts some strong threads in a radial arrangement which result to be extremely sensitive to the movements of the potential prey.

The fast and capable spider comes



Fig. 3 - Female of *Segestria florentina*, (loc. "Le Cesine" Vernole - Lecce, 10th September 2001), length 23 mm. Photo: R. Pepe.



Fig. 4 - Female of *Segestria florentina*, frontal vision, you can see the evident chelicerae (loc. "Le Cesine" Vernole - Lecce, 10th September 2001), length 23 mm. Photo: R. Pepe.

out of his hole only for hunting (or in the case of a male also to look for a female) and then it comes “back out”.

The species is active throughout the good season (spring and summer) up until autumn and mating occurs towards the end of summer.

This spider is the largest representative of the family Segestriidae present in Salento, as well as either two species which are *Segestria senoculata* (Linnaeus, 1758) and *S. bavarica* C.L. Koch, 1843, which are present throughout the Italian territory (PESARINI, 1995).

In nature it is often found within its silky tubular nest, under the bark of a tree (often *Eucalyptus* trees well spread through the territory) in the cavity and openings of the aforementioned trees (also olive trees) and at times between and under stones.

S. florentina is a species which in colder climates prefers to become synanthropic, thus it is very common in the cities (HANSEN, 1996; TRENTINI and MARINI, 1998).

In Salento, even if it scarcely becomes synanthropic (as a result of climatic conditions present throughout the year) it can still be found in the surrounding areas or in the countryside, rarely in the city (personal observation), hidden within its shelter and between piles of wood, in holes of buildings, between window shutters and blinds or wandering. Hidden among pieces of firewood it can be introduced by man into houses by chance.

CONCLUSION

This large spider, common in a large part of the world and well known to be a synanthropic species, is also well known in the literature of medical interest: the cases described proves that the specie causes just light local effects, as for example a blushed skin (HANSEN, 1996), a swelling in the bitten part (BETTINI and BRIGNOLI, 1978). Only two cases show other symptoms such as burning sensation, pain and a less tactile sensibility for some hours (TRENTINI and MARINI, 1998).

As it is evident from the different cases illustrated elsewhere, the bite of *S. florentina* is not dangerous for man. About the case here illustrated, the victim showed systemic symptoms (due to the poison) which are worth to be mentioned even if they gave not worry at all.

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