

## PHILODRYAS PATAGONIENSIS BITE AND LOCAL ENVENOMING.

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### SUMMARY

A 5-year-old boy bitten by a specimen of *Philodryas patagoniensis*, a colubrid snake currently classified as nonvenomous, developed signs of local envenoming characterized by swelling and warmth on the bitten limb. This is the first time that local envenoming following *Philodryas patagoniensis* bite is recognized. Based on the clinical findings and misidentification of the snake, the patient was treated as a victim of *Bothrops* bite, having received unnecessarily the specific antivenom. Educational efforts to make doctors and health workers capable to identify correctly venomous snakes are necessary, to avoid inappropriate indication of antivenom and decrease the risk of its potentially harmful untoward effects. Examination of the bite site can be useful to the differential diagnosis between pit viper and colubrid bites.

**KEYWORDS:** Colubridae; *Philodryas patagoniensis*; Snake bites; Venom.

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### INTRODUCTION

In Brazil there are venomous snakes belonging to four different genera: *Bothrops* (lance-headed vipers), *Crotalus* (rattlesnakes), *Lachesis* (bushmasters) and *Micrurus* (coral snakes). In different case series, however, up to 40% of the cases of snake bite are caused by so-called nonvenomous snakes<sup>9</sup>. Most of these cases are caused by snakes of the families Boidae, e. g. boas (in Brazil, "jibóias") and anacondas ("sucuris"), and Colubridae. Some victims of the bite of certain colubrids develop signs and symptoms of local and/or systemic envenoming.

We report the case of a child who had signs of local envenoming after being bitten by a colubrid, *Philodryas patagoniensis*.

### CASE REPORT

A 5-year-old boy was admitted to the hospital com-

plaining of being bitten by a snake one hour before. On physical examination he had mild swelling and warmth on his right leg. The clotting time was 8 minutes, and the prothrombin time 14 seconds (60% of the control for the day). The snake was killed and brought to the hospital. Based on the clinical findings and misidentification of the snake, the patient was treated as a victim of *Bothrops* bite, being given the specific antivenom. The clotting time 10 hours after the admission was 8 minutes, the fibrinogen 186 mg/dl, and the serum creatinine, urea, sodium and potassium were also within the normal range. The snake was later identified as a specimen of *Philodryas patagoniensis* (Figure).

### DISCUSSION

Envenoming by colubrid snakes has been recognized for more than a century<sup>5</sup>, but interest on this subject has increased since the 1960s, because many

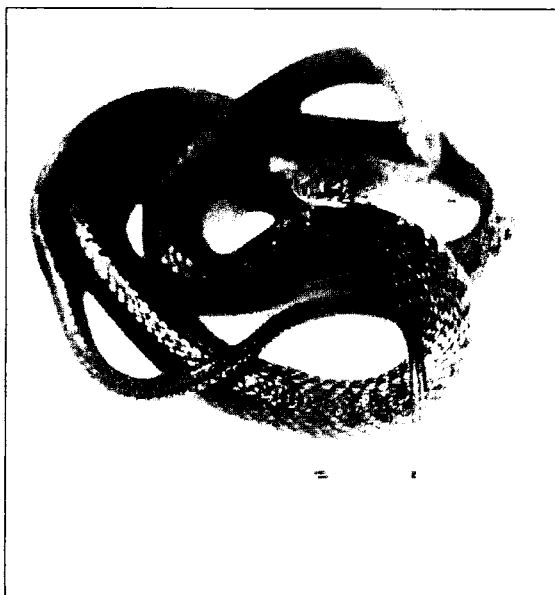


Figure - Specimen of *Philodryas patagoniensis* (match measuring 4.0 cm gives an idea of the size of the snake).

reports of envenoming in patients bitten by snakes of this family have appeared in the literature, particularly in people in North America or Europe who have snakes as pets<sup>3,5,12</sup>. Among the colubrids there are species that have no fangs (aglyphs) and others who are back-fanged (opisthoglyphs); species of the latter have caused either local and systemic envenoming in humans<sup>5</sup>. Most of these snakes are believed to be nonvenomous, and the problem of colubrid bites has been largely ignored in chapters on snake bite in many textbooks of Internal and Tropical Medicine. In Brazil, for instance, the latest editions of manuals on snake bite published by the Ministry of Health and the São Paulo State Secretary of Health do not even mention the problem of colubrid bites<sup>2,8</sup>.

In Brazil there are at least two species of colubrids who have been associated to envenoming in humans. To our knowledge, all of the published cases but one were caused by *Philodryas olfersii*, a green snake, and their victims had local envenoming characterized by swelling of the bitten limb<sup>4,6,10,11</sup>. *P. olfersii*'s venom has been shown experimentally to have haemorrhagic, fibrinolytic, fibrinolytic and oedema-inducing activity<sup>1</sup>. There was also the victim of the bite of a "muçurana" (*Clelia clelia plumbea*) who developed signs of local envenoming<sup>7</sup>.

We believe that the case herein reported deserves

registration for two reasons. Firstly, it is the first description of local envenoming by a *P. patagoniensis* specimen, although, as pointed out above, it is well known the fact that another species of the same genus, *P. olfersii*, can cause the same clinical picture.

Secondly, *P. patagoniensis* bite now becomes a differential diagnosis of snake bite with local envenoming. Signs of inflammation on the bitten limb are also part of the clinical picture of lance-headed viper and bushmaster bite; in this case it was misdiagnosed as the former and the patient received unnecessarily the antivenom. We recently reported a similar case of a patient bitten by *Drymarcon corais* who actually developed anaphylactic shock after being treated with antivenom as *Bothrops* bite<sup>11</sup>. In both cases the snake was captured, but misidentified by the staff at the hospital.

It is widely accepted in Brazil that the diagnosis of *Bothrops* bite can be made reliably only on clinical grounds. Nevertheless, attention must be paid by doctors and other health workers to the differential diagnosis with colubrid bites. Training in recognition of venomous snakes, not at all difficult in the Americas, where most of them are easily recognizable pit vipers, must be part of the medical training and continuous medical education. In the cases of snake bite when the snake is not available for identification, examination of the bite site can provide a clue for the differential diagnosis of pit viper bite (generally one or two fang marks) and colubrid bite (generally several tooth marks). Immunological diagnosis of envenoming<sup>13</sup> can be extremely useful in the differential diagnosis, but currently there are not tests commercially available in South and Central America.

## RESUMO

### Picada por *Philodryas patagoniensis* e envenenamento local

Um menino de 5 anos de idade foi picado por um espécime de *Philodryas patagoniensis*, uma serpente colubridea tida como não peçonhenta, tendo apresentado sinais de envenenamento local caracterizados por edema e calor. Esta é a primeira vez que se descreve que *Philodryas patagoniensis* pode causar envenenamento local. Com base nos achados clínicos e na identificação errônea da serpente, o paciente foi tratado como vítima de acidente botrópico, tendo recebido antiveneno específico. São necessários esforços para proporcionar a

médicos e outros profissionais da área de saúde informações para o reconhecimento de serpentes peçonhentas, o que evitaria o uso inapropriado de antiveneno e seus potenciais efeitos adversos. Exame do local da picada pode ser útil para o diagnóstico diferencial entre serpentes da subfamília Crotalinae (peçonhentas) e da família Colubridae.

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