



## LETTERS TO THE EDITOR

### We need better medical undergraduate education in Ecuador. The case of perinatal mortality



### Necesitamos una mejor educación médica de pregrado en el Ecuador. El caso de la mortalidad perinatal

Dear Editor,

Ecuador a mid-income country has more than 15 million inhabitants with one third (36%) living in rural areas and 17.6 physicians per 10 000 inhabitants, mostly working in urban areas.<sup>1</sup> Obstetrical complications account for the high maternal mortality rate of 87 per 100.000 live births.<sup>2</sup>

Medical undergraduate training in Ecuador is provided in the large cities by public and private universities. Students have little or no contact with rural areas until their sixth and final year of general medical education. The under-graduate medical curriculum comprises three years of instruction in pre-clinical subjects followed by two years of clinical education in teaching hospitals. The sixth year is an internship program divided in five rotation areas: clinical, surgery, emergency, gynecology and obstetrics, and pre-rural.<sup>3</sup>

The recent graduates doing their compulsory rural year are called "rural doctors". Health services in rural areas are different from those in urban settings. They are very likely to provide obstetric care and to perform more procedures than their urban counterparts due to a lack of specialists in rural communities.<sup>4</sup>

A recent quantitative study showed that the skills needed in rural areas were not trained in the final undergraduate years. We assessed the possible mismatch of obstetrical skills between the training offered in Ecuadorian medical schools and the tasks required for compulsory rural service. Many perinatal skills were found to be important by the rural doctors, but they were not trained during the undergraduate curriculum (episiotomy and repair, umbilical vein catheterization, speculum examination, evaluation of cervical dilation during active labor, neonatal resuscitation and the more advanced skill vacuum-assisted vaginal delivery). The simple skill episiotomy and repair was seen as important to all respondents, but during the undergraduate curriculum

only 39% of rural doctors performed the task three times and 8% even only once during the internship, similar pattern is seen in the others.<sup>5</sup>

A subsequent qualitative study confirms the main findings, i.e. the lack of teaching at the medical schools does not meet the needs of the rural doctors.

We do not know what share the observed high mortality rate may be due to the way the graduates were trained in the preceding medical education. But from the public health point of view innovative teaching of students is needed. The magnitude of the mismatch between training in the medical schools and medical practice in rural areas needs to be addressed. Although in 2008, fourteen universities were closed down by the government.<sup>6</sup> One of the biggest reasons of the observed translation on poor training of the graduates may be that the faculty is very volatile and the teaching methods are not meeting modern standards.<sup>3</sup> There is no clear profile of the recent graduate medical doctor at the national level. The need for a common, comprehensive doctor profile that addresses health needs and clinical competences in line with real settings encountered after graduation requires a continuous updating of university curriculum.

Important issues to address include: What are the skills that young doctors need in rural areas? How well are they prepared to use them? How can we best train them and monitor the quality of their clinical work? Answering these questions like this could be a powerful first step in improving medical education nationwide. In the two universities we have knowledge of, senior faculty changes vary rapidly. For instance, at one University the Deans staff changed three times over the last 5 years, leaving partly finished innovative curriculum changes. The medical schools of Ecuador deserve more and more managerial stability and a clear vision of their essential tasks which is to provide competent young doctors.

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## Conflicts of interest

The authors report no conflict of interest.

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## Enfermedad por arañazo de gato. Presentación de varios casos clínicos



### Cat scratch disease. Presentation of several clinical cases

Sr. Editor:

La enfermedad por arañazo de gato es una enfermedad infecciosa de curso benigno, causada por *Bartonella henselae*, bacilo gramnegativo aerobio, habitualmente es transmitida por medio del arañazo o mordisco de gatos infectados<sup>1-3</sup>.

Constituye una de las causas más frecuentes de linfadenopatía regional dolorosa en niños y adultos jóvenes. Puede afectar a numerosos órganos y causar diversidad de manifestaciones clínicas. En más del 80% de los casos la clínica consiste en una adenopatía solitaria cuya localización depende del lugar de inoculación. En la mitad de las ocasiones comienza como una pápula o pústula entre 0,5-1 cm. La lesión primaria se desarrolla entre 3-10 días después del arañazo, y puede persistir hasta 8 semanas. Posteriormente aparece una linfadenopatía regional, asociando síntomas sistémicos variables. Generalmente las adenopatías tienen una resolución espontánea, sin embargo, entre el 10-15% de los casos se transforman en supurativas<sup>1,3</sup>.

La expresión de la enfermedad varía desde una adenopatía crónica autolimitada (la mayor parte de los casos) hasta una enfermedad sistémica grave. En un 50% de los casos se acompaña de febrícula y malestar general, asociando con frecuencia cefalea, odinofagia y anorexia. Existen cuadros atípicos que cursan

con fiebre de origen desconocido, osteomielitis, estatus epiléptico<sup>2,3</sup>, conjuntivitis con adenopatía preauricular (síndrome óculo glandular de Parinaud), encefalitis, lesiones osteolíticas, hepatitis granulomatosa, neuritis óptica o coriorretinitis<sup>3,4</sup>. En pacientes inmunocomprometidos puede producir angiomas bacilar con numerosos tumores vasculares de color marrón o violáceo<sup>1</sup>.

El diagnóstico se confirmará serológicamente mediante técnica de inmunofluorescencia que determinará la presencia de anticuerpos anti-*Bartonella*<sup>1-3</sup>. La *Bartonella* puede ser cultivada a partir de una muestra de sangre, de nódulos linfáticos y de otros tejidos. También se puede hacer reacción en cadena de la polimerasa frente a *Bartonella*<sup>3</sup>.

La azitromicina constituye el tratamiento de elección. Algunos estudios han demostrado la desaparición más rápida de las adenopatías con tratamiento antibiótico, así como la menor progresión hacia una enfermedad sistémica<sup>5,6</sup>.

Las actividades preventivas son esenciales en el control de la enfermedad (evitar mordeduras y arañazos de gatos o proceder a la desinfección precoz de las heridas)<sup>1</sup>.

### Descripción de casos clínicos

*Adenopatías cervicales (9 casos):* 6 varones y 3 mujeres entre 11-83 años de edad que presentan nódulo laterocervical de evolución subaguda. Antecedentes personales (AP): Hábitat rural. Dos afirmaban arañazo de gato. Exploración: adenopatías cervicales, induradas, 2 de ellas abscesificadas, de entre 2-4 cm de diámetro.

*Adenopatías axilares (4 casos):* 2 varones (17 y 55 años) y 2 mujeres (26 y 44 años) con adenopatías dolorosas axilares. AP: 2 pacientes refieren arañazo de gato, uno mordedura en la mano y el cuarto no recuerda antecedente.