Epidemiological Alert

Increase of microcephaly in the northeast of Brazil

17 November 2015

Given the unusual increase in cases of microcephaly in some northeast states of Brazil, the Pan American Health Organization (PAHO) / World Health Organization (WHO) calls upon Member States to remain alert to the occurrence of similar events in their territories and to notify its occurrence through the channels established under the International Health Regulations (IHR).

Situation summary

In October 2015 the Brazil Ministry of Health reported an unusual increase in cases of microcephaly in the state of Pernambuco, located in the northeast of Brazil. On average, the state of Pernambuco registered 10 cases of microcephaly per year. However, since the beginning of 2015 through 11 November 2015, there were 141 cases of microcephaly detected in 44 of the 185 municipalities of the state of Pernambuco.

The Brazil Ministry of Health reported the states of Paraiba[1] and Rio Grande do Norte are reporting a similar situation. In the state of Rio Grande do Norte 35 cases of microcephaly were recorded from August 2015 to 16 November 2015.[2] Most recently, the state of Piauí[3] also reported an unusual increase.

In response to the situation, the Brazil Ministry of Health has declared a national public health emergency.[4]

The national health authorities of Brazil are investigating the cause of the event. Clinical, laboratory, and ultrasound analysis of mothers and newborns is being carried out.

Microcephaly CIE-10: **Q02**

Microcephaly is a neurological disorder in which the occipitofrontal circumference is smaller than that of other children of the same age, race, and sex.

It is defined as a head circumference of 2 standard deviations (SD) below the mean for age and sex or about less than the second percentile.

Microcephaly can be caused by a variety of genetic and environmental factors.

Children with microcephaly may present with developmental problems. In general, there is no treatment for microcephaly, but early intervention can help improve the development and quality of life of the child.

[1] Paraiba State Health Secretary: http://paraiba.pb.gov.br/saude-discute-notificacao-de-casos-de-microcefalia-na-paraiba-nesta-sexta-feira/
[2] Rio Grande do Norte State Health Secretary: http://www.saude.rn.gov.br/Conteudo.asp?TRAN=ITEM&TARG=96603&ACT=&PAGE=&PARM=&LBL=Materia
[3] Piauí State Health Secretary: http://www.saude.pi.gov.br/noticias/2015-11-13/6805/nota-casos-de-microcefalia.html
[4] Brazil Ministry of Health press release: http://portalsaude.saude.gov.br/index.php/cidadao/principal/agencia-saude/20629-ministerio-da-saude-investiga-aumento-de-casos-de-microcefalia-em-pernambuco

Advice to public health authorities

Although the cause(s) of this event has not been determined yet, this information is being shared with Member States to raise awareness of the situation and request that they be alert to the occurrence of similar events in their territories.

For these reasons and in order to contribute to further understanding the etiology of this event, PAHO/WHO urges Member States to notify any increase of microcephaly or other neurological disorders in newborns that cannot be explained by known causes.

Surveillance and investigation

PAHO/WHO recommends analyzing live birth databases, specifically in relation to malformations/ neurological disorders, in order to detect any unusual increase in occurrence. Surveillance of microcephaly must be integrated into the monitoring of congenital malformations. This surveillance should be continuous to better determine the magnitude and burden due to the disorder.

There are no absolute values to define microcephaly given that it varies by race, sex, and gestational age. For this reason, the WHO child growth standards tables on head circumference-for-age, with percentiles, and expanded tables for constructing national health tables is provided in this link: http://www.who.int/childgrowth/standards/hc_for_age/en/.

Any increase of microcephaly or other neurological congenital disorder must be assessed and investigated.

Clinical manifestations and clinical management of cases

Infants with microcephaly often have other concurrent disabilities. Different symptoms and signals associated with microcephaly (very small head, difficulty feeding, high pitched crying, seizures, spasticity of arms and legs, developmental delays and disabilities, among others) have been described. Infants with suspected microcephaly must always be evaluated by a healthcare professional. In addition to the clinical evaluation, neuroimaging tests to evaluate possible structural damage are generally required.

There is no specific treatment for this problem. Infants with microcephaly showing a developmental delay might benefit from early intervention programs or developmental, physical, and occupational therapy as well as interdisciplinary programs.

References

1. World Health Organization. Child growth standards: Head circumference-for-age. Available at: http://www.who.int/childgrowth/standards/hc_for_age/en/

2. Harris, S.R. Measuring head circumference, Update on infant microcephaly. Can Fam Physician 2015; 61:680-4.

3. WHO/CDC/ICBDSR. Birth defects surveillance: a manual for programme managers. Geneva: World Health Organization; 2014. Available at: http://www.who.int/nutrition/publications/birthdefects_manual/en/