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WS

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

WS 216-2018

Replacing WS 216-2008

**Diagnosis for dengue fever
(English Translation)**

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Foreword

Chapter 5 of this standard is mandatory and the rest are recommended.

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces WS 216-2008 "Diagnosis Diagnostic Criteria".

Compared with WS 216-2008, the main technical changes of this standard are as follows.

- Revised the scope of application (see Chapter 1, Chapter 1 of the 2008 edition);
- Terms and definitions removed the beam arm test, adding severe dengue fever and NS1 antigen (see Chapter 2, Chapter 2 of the 2008 edition);
- Revised clinical performance (see Chapter 3, 3.2 of the 2008 edition);
- Revised laboratory tests (see Chapter 3, 3.3 of the 2008 edition);
- Removed the "blood concentration; hypoalbuminemia" indicator (see 3.3.3 of the 2008 edition);
- Added "positive detection of dengue virus NS1 antigen within 5 days of onset" (see Chapter 3, 3.3 of 2008);

- Revised suspected cases (see Chapter 5, 5.1 of the 2008 edition);
- Revised clinically diagnosed cases (see Chapter 5, 5.2 of the 2008 edition);
- Revised confirmed cases (see Chapter 5, 5.3 of the 2008 edition);
- increased severe cases (see Chapter 5, 5.4 of the 2008 edition);
- Adjusted the order of Appendix A and Appendix B;
- Appendix A adds the method of "enzyme-linked immunosorbent assay for detection of dengue virus NS1 antigen" and deletes the original "hemagglutination inhibition (HI) test Method for testing dengue virus hemagglutination inhibitory antibodies" (see Appendix A and Appendix B, Appendix A and Appendix B of the 2008 edition);
- Revised the contents of Appendix D to replace the original "dengue hemorrhagic fever" and "dengue shock syndrome" with "severe dengue fever".

Indications for high-risk populations of severe dengue fever and early identification of critically ill cases are included (see Appendix D, Chapter 5, Appendix D of the 2008 edition).

This standard was drafted. Guangdong Provincial Center for Disease Control and Prevention, Guangzhou Eighth People's Hospital, China Center for Disease Control and Prevention, viral disease Prevention and Control Institute, China Center for Disease Control and Prevention, Beijing Ditan Hospital, Capital Medical University, China Academy of Military Medical Sciences, Microbial Flow Institute of Diseases.

1 Scope

This standard specifies the diagnostic basis, diagnostic principles, diagnosis and differential diagnosis of dengue fever.

This standard applies to all types of medical and health institutions and their medical staff for the diagnosis of dengue cases.

2 Terms and definitions

The following terms and definitions apply to this document.

Severe dengue fever severe A serious type of dengue, clinical manifestations of severe bleeding, shock, severe organ damage.

NS1 antigen NS1 antigen A glycoprotein in a non-structural protein of dengue virus, which is abundantly present on the surface of infected cells and can be used as a specific reference for early diagnosis.

Standard.

3.1 Epidemiological history

Within 14 days before the onset of illness, dengue fever cases have occurred in dengue fever epidemic areas, or within 1 month of living places or workplaces.

3.2 Clinical manifestations

3.2.1

acute onset, sudden high fever, obvious fatigue, anorexia, nausea, etc., often accompanied by more severe headache, eyelid pain, body muscle pain, Symptoms such as bone and joint pain, may be accompanied by facial, neck, chest flushing, conjunctival congestion and so on.

3.2.2

Rash. On the 3rd to 6th day of the disease, a congestive rash or a spotted rash occurs in the limbs of the face. Typical rash is seen in the limbs Needle-like bleeding points and "Pice Island"-like performance. The rash is distributed on the torso or head and face of the limbs. It is often itchy and does not desquamate. Lasting 3 days~ 5 d.

3.2.3

bleeding tendency. some patients may have different degrees of bleeding, such as subcutaneous hemorrhage, injection site defect, gum bleeding, nose and beam arm test positive and so on.

3.2.4

severe bleeding. subcutaneous hematoma, gross hematuria, digestive tract, chest and abdomen, vagina, intracranial and other parts of the bleeding.

3.2.5

Severe organ damage. acute myocarditis, acute respiratory distress syndrome, acute liver injury, acute renal insufficiency, central nervous system System damage and other performance.

3.2.6

shock. tachycardia, wet end of the limbs, prolonged capillary filling time > 3s, weak pulse or undetectable, reduced pulse pressure difference or Blood pressure can not be measured.

3.3 Laboratory inspection

3.3.1

Reduced white blood cell count and/or thrombocytopenia.

3.3.2

Dengue virus IgM antibody positive (see A.1, A.2 in Appendix A).

3.3.3

Positive detection of dengue virus NS1 antigen within 5 days of onset (see A.3).

3.3.4

The titer of serum-specific IgG antibody in the recovery period of dengue virus is 4 times or more higher than that in the acute phase or positive (see A.4, A.5).

3.3.5

Dengue virus is isolated from blood, cerebrospinal fluid or tissue of patients with acute phase (see B.1, B.2 in Appendix B).

3.3.6

Detection of dengue virus nucleic acid by RT-PCR or real-time fluorescent quantitative RT-PCR (see B.3, B.4).

4 Diagnostic principles

Comprehensive judgment based on the patient's epidemiological evidence, clinical manifestations and laboratory findings.

5.1 Suspected cases

A suspected case can be diagnosed if one of the following is true.

- a) Compliance with 3.1 and 3.2.1 at the same time.
- b) Comply with 3.2.1 and 3.3.1 at the same time.

5.2 Clinical diagnosis cases

One of the following can be diagnosed as a clinically diagnosed case.

- a) Comply with 5.1a) and comply with any of 3.2.2, 3.2.3 and 3.3.1.
- b) Comply with 5.1 and comply with any of 3.3.2 and 3.3.3.

5.3 Confirmed cases

It can be diagnosed as a confirmed case if it meets 5.1 or 5.2 and meets any of 3.3.4, 3.3.5 and 3.3.6.