

NECA-Health Technology Reassessment Project
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NECA-R-20-001-26 (2020.11.)

Health Technology Reassessment Report 2020

Addis count

[Microscopic Examination]

Summary

Background of Assessment

Addis count [microscopic examination] is a test used to diagnose and treat kidney and urologic diseases by quantitatively counting red blood cells, white blood cells, epithelial cells, and circumferences in urine. It is a technology that was registered as an essential health benefit in the health insurance care benefit list in 1995. Laboratory medicine experts suggested the necessity of re-assessment of health technology with the opinion that Addis count [microscopic examination] is an obsolete technology due to the development of kidney disease diagnosis methods. With reference to this, the National Evidence-based Healthcare Collaborating Agency discovered topics through internal monitoring. This technology was selected as a health technology re-assessment agenda at the 6th Health Technology Reassessment Committee (2020.06.26.) in 2020, and clinical safety and effectiveness were evaluated to provide evidence for efficient use of health and medical resources.

Committee's operation

To evaluate whether Addis count [microscopic examination] is clinically safe and effective in the diagnosis or progress, prognosis, and treatment suitability of patients with renal and urologic diseases (suspected), systematic literature review, domestic and international clinical treatment guidelines, health technology assessment were extensively searched. The subcommittee consisting of a total of 6 members (2 from the Department of Laboratory Medicine, 2 from the Department of Nephrology, 1 from the Department of Pediatrics, and 1 from the Department of Evidence-Based Medicine) held three meetings for about 4 months until October 18, 2020, to evaluate the safety and effectiveness of this technology. At the 11th Health Technology Reassessment Committee (2020.11.13.) in 2020, the safety and effectiveness assessment results of the Addis count [microscopic examination] subcommittee were finally reviewed.

Assessment Results

As a result of a systematic review of the literature, there were no documents that reported research results related to the safety and effectiveness of this test, and the contents of Addis count could not be confirmed even through the review of clinical practice guidelines and health technology assessment.

The subcommittee of this assessment determined that the evidence was insufficient to evaluate the safety and effectiveness of this test. However, with regard to safety, this technology is an in vitro test conducted after collecting urine and does not pose any direct harm to the human body through the process of sample collection, so it was considered that the safety problem associated with the test performance would be low. In addition, the effectiveness of the technology was evaluated as not much clinically effective in that the test method for cast and blood count was inefficient and inaccurate compared to the automatic urine microscopic analyzer currently commonly used in clinical practice.

Conclusion and Suggestions

The Addis count [microscopic examination] subcommittee made the following recommendations through this assessment.

The Addis count [microscopic examination] technology was judged to have no problem in safety according to the test, but it was evaluated that the evidence for clinical effectiveness was insufficient.

The 11th Health Technology Reassessment Committee in 2020 deliberated as follows on the 'Addis count [microscopic examination]' based on the results of the subcommittee's review (November 13, 2020).

The Health Technology Reassessment Committee does not recommend an Addis count [microscopic examination] to differentiate or determine the course, prognosis, and treatment suitability of patients with renal and urologic diseases (recommendation grade II). The reason is as follows.

The literature basis for the safety and effectiveness of Addis count [microscopic examination] cannot be verified. It is a technology that is currently rarely used in clinical practice, and there is a test that is universally used instead of it, so the test was judged as a technology with no clinical usefulness.

Keywords

Kidney Diseases, Urologic Diseases, Hematuria, Urine, Addis count