

Systematic review and meta-analysis

Normal diagnostic test results do not reassure patients

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Context

Physicians often send patients for diagnostic testing with the belief or hope that the patient will be reassured by a normal test result.

Methods

In this well-done systematic review meta-analysis, Rolfe and colleagues searched for randomised controlled trials (RCTs) of patient populations with clinical features that indicated they were unlikely to have a serious disease. The studies selected each had a group of patients randomised for diagnostic testing and a group that was not tested during the study. The outcome measure was patients' reassurance, which included illness concern, anxiety, change in the original symptoms and subsequent doctor visits. The search strategy was targeted towards initial diagnostic tests in primary or secondary care for symptoms with a low likelihood of serious disease. Findings are presented as ORs and standard mean differences (SMD).

Findings

The authors identified 14 RCTs that compared patients' reassurance for patients sent for testing versus untested patients (n=3828). Nine trials took place in a primary care setting, and five in a specialist internal medicine setting. Most studies were of moderate quality, and the outcomes of high-quality trials did not differ from those of lower quality.

Three trials that assessed illness concern found that diagnostic tests did not reduce patients' worry about their illness relative to patients who had not been tested (OR=0.87, 95% CI 0.55 to 1.39). Two trials assessed general anxiety, and both found that diagnostic testing had no effect on anxiety (SMD=0.06, 95% CI -0.16 to 0.28). Ten trials assessed symptom persistence; the meta-analysis found no long-term effect of diagnostic tests on continuation of symptoms (OR=0.99, 95% CI 0.85 to 1.15). Eleven studies assessed subsequent consultation with a physician. The meta-analysis found a small decrease in visits after diagnostic tests (OR=0.77, 95% CI 0.62 to 0.96).

Commentary

Overall, the findings demonstrate that normal diagnostic test results are ineffective at reassuring patients. The meta-analysis found no effect of diagnostic tests on patients' concern about illness, anxiety or symptom persistence. While diagnostic tests did result in a small reduction in subsequent consultations with primary care physicians, it seems unlikely that this reduction in visits justifies the high cost of diagnostic testing, nor the risk to patients for some of the more invasive procedures.

While the results are reasonably consistent across the studies in the review, it should be noted that there are only a small number of investigations in this area. It is striking that reassurance, an intervention so commonly used by doctors, receives so little research attention. In particular, there is a lack of studies to guide doctors on how to improve patient reassurance following normal test results. There is a need for more RCTs to directly assess the value of diagnostic testing on reassurance and healthcare costs.

Patients' beliefs about their symptoms and illness are an important driver for seeking medical care and investigations.¹ One of the difficulties with providing reassurance is that it is typically given after the results of testing, and patients may have already developed negative ideas about their symptoms that restrict their ability to take on reassuring information. Furthermore, patients often lack information about the meaning of different medical tests and may interpret information that the tests were normal as 'the doctor hasn't found what is wrong yet'. Providing patients, before testing, with an explanation about what the investigations are looking for and what a normal result means can provide a framework to help patients make sense of normal results. This will likely strengthen the reassuring message from their doctor.²

In general, telling patients that nothing is seriously wrong seems to be less effective than providing patients with possible alternative, but less serious, explanations for their symptoms. Such explanations can reduce worry about symptoms and help patients stop ruminating about what could be causing their condition. Highly anxious patients do require extra attention in order for the reassurance to be effective following normal test results.³ The anxious cognitive style of scanning for signs of trouble and negative interpretation means that only telling patients nothing is wrong is unlikely, by itself, to allay an anxious patient's concerns about their symptoms. More guidance is needed to help general practitioners manage anxious patients' concerns about symptoms, and to limit the iatrogenic harm from possible over-investigation.⁴

Competing interests None.

References

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