'Difficult-to-treat asthma' may be due to difficult-to-treat patients

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Difficult-to-treat asthma often may have more to do with patients who do not take their medication as instructed than ineffective medication, according to researchers in Northern Ireland.

"[A] significant proportion of patients with difficult asthma are poorly adherent to inhaled and oral corticosteroid therapy," wrote principal investigator, Dr. Liam Heaney, of Belfast City Hospital.

The results of the study were published in the November 1 issue of the American Journal of Respiratory and Critical Care Medicine, an official publication of the American Thoracic Society.

"Defining the scale and identifying non-adherence in this population is important given currently available and other imminent expensive biological therapies," said Dr. Heaney.

Dr. Heaney and colleagues obtained data from almost 200 patients who were referred to a tertiary referral clinic that specializes in treating difficult asthma. To assess compliance with inhaled corticosteroid therapy (ICT), they compared patient prescription to the patient's actual refill usage. They used blood plasma prednisolone and cortisol levels to evaluate oral medication adherence.

Of the 182 consecutive patients, 35 percent filled fewer than half of their prescribed inhaled combination therapy (ICT), 21 percent filled more than they were prescribed and 45 percent filled between half and

all of the medication they were prescribed.

Furthermore, in patients who were on a maintenance course of oral prednisolone, blood levels of cortisol and prednisolone showed that nearly half (45 percent) were not taking the medication as prescribed. In follow-up conversations with the researchers, most admitted that they were inconsistent in the use of their medications. Of the 23 patients who were non-adherent to their oral prednisolone, 15—or 65 percent—were also non-adherent to their ICT.

"All subjects had initially denied poor medication adherence, and poor adherence only became apparent using a combination of surrogate and objective measures," said Dr. Heaney. "Of these patients who were referred for assessment and treatment of difficult asthma, many are actually not taking their treatment as prescribed, which would suggest an important first course of action in assessing difficult asthma may actually be verifying the patient's adherence to his or her treatment protocol. Determining whether the patient is taking medications as prescribed is of utmost importance before moving to more aggressive and expensive treatments. It is also crucially important in understanding true refractory disease and assessing responses to novel therapies, either in clinical trials or clinical practice."

Some patient characteristics were more strongly associated with nonadherence than others: women were less likely to be adherent than men, a finding that had been previously identified, but that Dr. Heaney cites as needing more investigation.

Another red flag may be a lower score on quality of life measures. Dr. Heaney and colleagues found that patients who filled fewer than half of their prescribed ICT scored significantly lower on the EuroQol and the Asthma Quality of Life Questionnaire. Furthermore, the number of prior hospital admissions within the past 12 months was significantly

associated with non-adherence.

"In general, one might expect in more severe disease that a very poor asthma quality of life score suggesting high morbidity, would perhaps, result in better adherence, " said Dr. Heaney. "The same could be said for hospital admission, but the reasons for non-adherence are complex. However for clinicians, multiple hospital admissions should definitely flag probable non-adherence in difficult-to-treat cases."

"Non-adherence is a common problem, which is often hard to detect. In general, asking the patient or relying on clinical impression is useless, and objective or good surrogate measures should be utilized. However, we need to try and develop better objective tests for this problem, and we are currently looking at some novel techniques to do this," Dr. Heaney concluded.

Source: American Thoracic Society (news : web)