USING AN ELECTONIC MEDICAL RECORD DECISION TOOL TO IMPROVE CARDIOVASCULAR RISK SCREENING IN RHEUMATOID ARTHRITIS

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Introduction

Background: Cardiovascular disease (CVD) is the leading cause of death among individuals with rheumatoid arthritis (RA)(1)
The 2010 EULAR guidelines recommended annual CV risk assessment for all RA patients in accordance with national guidelines(1)
However, CVD risks are not being assessed frequently and systematically in RA patients(2)

Objective: To determine if implementing an Electronic Medical Record (EMR)-based clinical decision support tool at a large tertiary care center improved lipid screening in RA.

Developing EMR Tool

A self-populated data form that was incorporated into each EMR visit for each patient with an ICD9 (International Disease Classification) code for RA (714.0). The form contained the following information:

• Dates of the latest assessment of CVD risks (BMI, blood pressure, smoking status, lipid screening);

• The latest values for all of the above CVD risks;

• Framingham risk score calculator. The form was made available for the rheumatology providers (n=15) in July of 2013. In October 2013, a similar alert was embedded within existing CVD screening forms used by the primary care providers (n=365) to alert them about the need to screen RA patients for CVD risks

Cardiovascular risk screening: V1.3
☐ Lab values reviewed.
Total Cholesterol: 134 (10/03/2013 7:51:00 AM) TC goal <=200mg/dl
LDL: 79 (10/03/2013 7:51:00 AM) LD goal <=100mg/dl
HDL: 31 (10/03/2013 7:51:00 AM) HDL goal >=40mg/dl for men, 50mg/dl for women
Triglycerides: 118 (10/03/2013 7:51:00 AM) TC goal <=150mg/dl
BP: 131 / 82 138/81 03/27/2014 BP goal 140/80
BMI: 29.39 30.49 (03/27/2014 9:48:14 AM) BMI <=26 and <30 is overweight, >=30 is obese
Smoking status: Never smoked (03/05/2014 9:34:52 AM)
Framingham risk: 11 % (10/03/2013 1:53:48 PI Framingham calculator

(% risk of developing heart disease within 10 years): (or to say info missing, can't calculate)
☐ Is disease duration > 10 years, or aggressive disease , or elevated ESR/CRP? Recalculate:

Prev Form (Ctrl+PgUp) Next Form (Ctrl+PgDn) Close

Evaluating EMR Tool

• Excluded RA patients who also had type 2 diabetes, as the presence of diabetes may have affected screening

• Determined how many adult (>18 years old) RA patients had either a documented lipid panel or had a lipid panel order in EMR before (July 2012 to January 2013) and after (July 2013 to January 2014) the implementation of the alert

• Compared the rates of lipid screening/ordering in RA in the two time periods

• Compared the frequencies of lipid screening/ordering between RA and type 2 diabetes groups

• Performed a subgroup analysis limited to RA patients seen by the rheumatologists during the study period

Results

• 815 RA patients seen in an outpatient setting between July 2012 and January 2013

    494/815 were seen by the rheumatologists

• 838 RA patients seen in an outpatient setting between July 2013 and January 2014

    510/838 were seen by the rheumatologists

• The mean age (SD) of RA patients was 58(15) years old

• Fewer than 50% of RA patients had lipid screening within one year from their index visit.

• The frequencies of screening and/or ordering a lipid panel were 30% pre-intervention and 28% post-intervention in the overall group (p=0.53)

Results

• Among patients seen by the rheumatologists, lipid screening/ordering frequency was 27% pre-intervention and 25% post-intervention (p=0.61)

• In contrast, lipid screening rates were >50% in type 2 diabetes patients seen in the same time period

Conclusions

• Implementing an EMR based decision support tool to alert providers about CVD screening in RA did not improve rates of screening for lipid abnormalities, at least short term

• Lipid screening rates remained low

• Barriers to CVD screening in RA among rheumatologists and primary care providers need to be identified and addressed

• Further efforts should be directed at educating RA patients about CVD risks associated with RA

Disclosures

References

1. Peters MJ, et al. Ann Rheum Dis. 2010 Feb; 69(2):325-331.

2. Chung CP, et al. Semin Arthritis Rheum. 2012 Feb; 41(4):535-544

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