hormone replacement therapy or oral contraceptive pill use, history of VTE, or obesity, which are supported by previous literature.

Unfortunately, the authors’ conclusions cannot be generalized to “podiatric surgery.” It would be more appropriate for the title to be clarified: “The incidence and risk factors for VTE in selected forefoot procedures.”

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References


Response

To the Editor:

We appreciate the opportunity to respond to Drs Budny and Rogers’ comments on our recent article in CHEST (April 2009). Although we agree that podiatrists and orthopedists may perform the same foot and ankle procedures, our intent was to describe the risk of venous thromboembolism (VTE) in patients under the care of a typical podiatrist doing common podiatric procedures in a common podiatric practice. Our database included more than 16,000 procedures done by all of the podiatrists in a large medical group over 5 years and reflects the variety of procedures performed by the vast majority of podiatrists, hence the title of our article. We did not exclude any particular foot or ankle surgeries; thus, the forefoot proportion is representative of the practice in podiatrists. Likewise, the podiatric distinction clarifies the confusion regarding incidence computation in the studies referenced in our article. Only one study estimated the incidence of VTE seen by podiatrists, whereas six studies explored VTE in foot/ankle surgery performed by orthopedists. Although we agree there is merit in either approaching VTE risk by surgical specialty experience or by specific procedures or anatomic regions, we chose to elucidate risk in a large general podiatrist practice.

By the same token, we chose not to exclude any of the procedures done in a typical podiatrist’s practice, including injections and percutaneous drainages. While a proportion of the 16,804 surgical procedures identified in our study involved foot injections (Current Procedural Terminology [CPT] 20550 or drainage of a joint/bursa/cyst (CPT 20605 and 20600)), incidence rates are computed at the patient level (n = 7,264 in our full study population), thus many patients had multiple procedures that included both these and more extensive surgeries. In performing a sensitivity analysis adjusting for injection/drainage procedures, we find three patients with symptoms postprocedure VTE who received both these procedures and more invasive surgeries. Adjusting our sample to include only those who had a more invasive procedure, we find the pool reduced to 5,621 individuals, and we continue to compute low adjusted incidence rates of VTE at 0.39% overall (0.21% for deep vein thrombosis only; 0.18% for pulmonary embolism only). Incidence rates remain in the low risk strata, and our conclusion that VTE prophylaxis is not indicated for routine podiatric procedures in patients without any additional risk factors for VTE remains valid, even after adjusting for injections/drainage. As we note in our paper, definitive decisions about VTE prophylaxis should be made on an individual patient basis; in this we agree with Drs Budny and Rogers.

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Specificity of a Quantitative Real-Time Polymerase Chain Reaction Assay for the Detection of Invasive Pneumococcal Disease

Identifying Streptococcus pneumoniae Using Quantitative Polymerase Chain Reaction

To the Editor:

Together with colleagues in Spain, we recently reported in CHEST (September 2009) on the potential clinical usefulness of
pneumococcal bacterial load using a new autolysin (lytA) quantitative polymerase chain reaction (qPCR) assay. At the time of submission one question we could not adequately address was the specificity of the qPCR assay when applied in routine clinical practice over an extended period of time.

We have now completed evaluation of 1,800 samples taken at the same time as blood cultures in our ED from consecutive patients with suspected acute infection. As shown in Table 1, using a positive blood culture for Streptococcus pneumoniae as the gold standard, the qPCR assay has a specificity of at least 99.5% (95% CI, 99.0%-99.8%).

We further investigated the clinical details of the nine patients who had PCR-positive/blood culture-negative sample results. In eight of these nine cases there was a clinical and radiologic diagnosis of pneumonia with no other pathogen isolated by blood or sputum cultures. We are therefore confident that these eight cases represent true positive results. The quantitative S pneumoniae bacterial load in all of these eight cases ranged from 3.4 copies/mL to 2 million copies/mL with the majority being less than 10,000 copies/mL. As in our previous study, the highest S pneumoniae bacterial loads were seen in patients with severe sepsis.

The final PCR-positive/blood culture-negative sample came from a patient with sepsis of presumed abdominal origin that resolved with ticarcillin/clavulanic acid. No other infecting organism was identified. To further explore the analytical specificity of the qPCR assay, we evaluated 10 separate Enterococcus spp isolates not tested in our original validation study and confirmed that there was no cross-reactivity with our lytA PCR assay. Although we cannot definitely rule out some other pathogen, from the clinical details it is likely that S pneumoniae was the causative organism.

In summary, we have found our lytA pneumococcal PCR assay to be highly specific, with no definite false-positive result occurring in 1,800 samples taken during routine clinical practice in a busy ED. Unlike many PCR assays introduced into clinical practice and unlike urinary pneumococcal antigen testing physicians can be confident that a positive lytA result indicates invasive pneumococcal disease.3,5

<table>
<thead>
<tr>
<th>Streptococcus pneumoniae</th>
<th>lytA PCR (+)</th>
<th>lytA PCR (−)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood culture (+)</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>Blood culture (−)</td>
<td>9</td>
<td>1,780</td>
</tr>
<tr>
<td>Total</td>
<td>1,800</td>
<td></td>
</tr>
</tbody>
</table>

lytA = autolysin; PCR = polymerase chain reaction.

Table 1—Comparison of Results Obtained From Real-Time Pneumococcal Autolysin Polymerase Chain Reaction and Blood Culture

References

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