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# The Increase in Absolute Arrhythmia a Thesis on the Causes of this Phenomenon

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**ABSTRACT**

The prevalence of absolute arrhythmia has been observed to increase continuously worldwide, as noted in medical literature and by health authorities such as Germany's Federal Health Office. This phenomenon raises concerns about its underlying causes and potential strategies for mitigation. Drawing from over 46 years of experience in internal medicine, the author hypothesizes that the reduction in the use of digitalis glycosides—specifically digoxin and digitoxin—may be a contributing factor to this rise. Despite historical concerns over digitalis toxicity and the advent of alternative therapies like beta-blockers and ACE inhibitors, the author presents his successful experience with low-dose digitalis therapy in stabilizing heart rhythm without side effects in several hundred patients. This paper explores the potential benefits of reintroducing low-dose digitalis therapy to counteract the increasing incidence of absolute arrhythmia and calls for a reevaluation of its role in modern cardiac care.

## Introduction

Absolute arrhythmia, characterized by an irregular and often rapid heart rate, has become increasingly prevalent in recent years. Reports from medical literature and observations by national health authorities, such as the Federal Health Office in Germany, indicate a continuous rise in cases globally. For instance, the "Deutsche Medizinische Wochenschrift" (DMW) highlights similar trends in countries like Denmark. This escalating occurrence prompts a critical examination of possible causes and effective interventions. Having dedicated over 46 years to internal medicine, I have witnessed firsthand the shifting patterns in cardiac arrhythmias. Toward the end of my practice in 2019, there was a noticeable uptick in patients referred to me with absolute arrhythmia. As a certified training center for self-monitoring of anticoagulation therapy with Marcumar (phenprocoumon), I maintained a comprehensive overview of developments in arrhythmia management. Reflecting on my early career as a junior doctor, senior consultant, and head physician, emergency treatments for absolute arrhythmia were remarkably rare in our hospital setting.

## Historical Context of Digitalis Therapy

In the early 1980s, the medical community began to critically reassess the role of digitalis glycosides in treating heart conditions. Digitalis preparations, derived from the foxglove plant, had been a mainstay in managing heart failure and associated arrhythmias, especially among older patients. They were often prescribed alongside antihypertensive therapies to enhance cardiac output and stabilize heart rhythm by improving conduction from the atria to the ventricles [1]. However, the introduction of beta-blockers and ACE inhibitors offered new therapeutic avenues with favorable outcomes in heart failure management. These alternatives, coupled with mounting concerns over digitalis toxicity, led to a gradual decline in the use of digitalis glycosides. In our clinic, cases of digitalis intoxication were not uncommon, with at least two to three incidents per week. These overdoses highlighted the challenges many physicians faced in dosing digitalis accurately, given its narrow therapeutic window and the potential for serious side effects, including conduction blocks and arrhythmias.

## Impact of Reduced Digitalis Use on Arrhythmia Prevalence

While heart failure is a significant factor in disrupting the cardiac conduction system, it is not the sole contributor. The withdrawal of digitalis medications may have inadvertently increased the frequency of disturbances in impulse propagation from the atria to the ventricles. Digitalis glycosides uniquely stabilize atrioventricular conduction, reducing the likelihood of arrhythmias. Their absence could leave a therapeutic gap unaddressed by beta-blockers and ACE inhibitors alone. It is important to acknowledge that high-dose digitalis therapy is associated with negative outcomes, such as an unfavorable oxygen balance in the myocardium when its full inotropic effect is exerted. Therefore, reintroducing digitalis at previous high dosages is neither practical nor safe. However, emerging evidence suggests that even low doses of digitalis can confer benefits in stabilizing cardiac conduction without eliciting adverse effects [2].

## My Experience with Low-Dose Digitalis Therapy

In my clinical practice, I have implemented low-dose digitalis therapy in several hundred patients presenting with intermittent absolute arrhythmia. The dosing regimen was carefully tailored to each patient, considering factors such as renal function and concomitant medications. Among both patients with normal kidney function and those undergoing dialysis, there were no reported side effects attributable to digitalis over several years of follow-up. The therapeutic outcomes were noteworthy. Patients exhibited stabilized heart rhythms, improved symptoms, and a reduced need for emergency interventions. The low-dose approach mitigated the risks associated with digitalis toxicity while leveraging its unique ability to enhance atrioventricular conduction. This strategy proved effective even in cases where other antiarrhythmic medications were contraindicated or had failed to produce desired results.

## Discussion

The reluctance to utilize digitalis glycosides in contemporary practice is understandable, given historical concerns over toxicity and the availability of alternative treatments. However, the escalating incidence of absolute arrhythmia calls for a reevaluation of all potential therapeutic options. Low-dose digitalis therapy represents a middle ground that harnesses the benefits of the drug while minimizing risks. Moreover, the negative effects commonly associated with digitalis therapy, such as conduction blocks and arrhythmias due to overdose, are largely avoidable with careful dosing and monitoring. Modern advancements in pharmacology and patient education further support the safe use of digitalis. For instance, regular monitoring of serum drug levels and renal function can prevent accumulation and toxicity [3].

## Conclusion

The continuous rise in absolute arrhythmia globally is a pressing concern that necessitates innovative solutions. My clinical experience indicates that low-dose digitalis therapy can effectively stabilize heart rhythms without significant side effects. This approach addresses a potential gap left by the reduced use of digitalis glycosides in recent decades. It is, therefore, prudent for the medical community to reconsider the role of digitalis in arrhythmia management. Given that other antiarrhythmic drugs often carry higher risks and may not provide the same conduction stabilization, low-dose digitalis therapy could offer a safer and effective alternative. Further research and clinical trials are warranted to substantiate these findings and potentially integrate low-dose digitalis therapy into standard care protocols for patients with absolute arrhythmia.

## Summary

It is certainly worth considering whether a limited renaissance of digitalis therapy could counteract the increase in absolute arrhythmia. The positive results achieved with low-dose digitalis in my practice suggest that reintroducing this therapy could stabilize heart rhythms effectively and safely. It remains incomprehensible why this is not at least the first approach to be tried, especially since all other antiarrhythmic drugs carry significantly higher risks. By revisiting and adapting digitalis therapy to modern medical practices, we may address a growing health concern with a time-tested yet overlooked solution.

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