

メトホルミンは前立腺がんの進行を遅延させるようである

Phase IIスタディにおいて前立腺摘出術前のメトホルミン使用は有害事象がほとんどなくがんの進行を遅延させる

Using metformin before prostatectomy slows cancer's growth with few adverse events in phase II study

前立腺摘除術前の男性に対するメトホルミン投与は一部の代謝系パラメータを改善させ、がん進行率を低下させるのに役立ったとのphase IIスタディの結果が2012年AACR学会で発表された。メトホルミンは糖尿病に対し最も一般的に処方される薬剤である。過去の実験結果によるとメトホルミンは前立腺がん患者のがん細胞増殖を遅延させることにより予後改善に役立つことが示唆された。この実験の手がかりをさらに追及するために、研究者らは前立腺がんと確定診断された男性22人に対し、前立腺摘除術前にメトホルミン500mg1日3回を期間中央値41日間投与し評価した。この期間中にグレード3の有害事象を報告した男性はおらず、いずれの男性もメトホルミン投与に関連した有害事象はなく前立腺摘除術を施行された。メトホルミンは空腹時血糖、インスリン増殖因子-1、ボディマスインデックスおよびウエスト対ヒップ比を有意に低下させた。さらに、プレリミナリーの結果では、メトホルミンは一部の男性において前立腺がんの増殖を軽減させるようであった。また腫瘍の全体的な増殖に関わる可能性のある主要な増殖パスウェイの一つを減少させるようでもあった。

Full Text

The use of metformin in men with prostate cancer before prostatectomy helped to reduce certain metabolic parameters and slow the growth rate of the cancer, according to the results of a phase II study.

Anthony M. Joshua, M.B.B.S., Ph.D., staff medical oncologist at the Princess Margaret Hospital, University Health Network in Toronto, Ontario, Canada, presented the data at the AACR Annual Meeting 2012.

Metformin is the most commonly prescribed medication for diabetes. Prior laboratory research has suggested that metformin may also help to improve prognosis in patients with prostate cancer by slowing the growth of the cancerous cells.

To follow up on the laboratory clues, Joshua and colleagues evaluated 22 men with confirmed prostate cancer who had been assigned up to 500 mg of metformin three times a day prior to undergoing prostatectomy.

"This gave us the ability to compare what the prostate cancer looked like when it was first diagnosed to what it looked like when the prostate cancer was removed from the body," said Joshua. "We were able to directly measure the effect of metformin on the prostate cancer."

Patients were assigned metformin for a median duration of 41 days. During that time, none of the men reported grade 3 adverse events, and all of them underwent prostatectomy with no adverse effect related to use of metformin.

The researchers found that metformin significantly reduced fasting glucose, insulin growth factor-1, body mass index and waist-to-hip ratio.

In addition, "although these are preliminary results, metformin appeared to reduce the growth rate of prostate cancer in a proportion of men," Joshua said. "Also, it appeared to reduce one of the main growth pathways that may have contributed to the overall growth of the tumor."

These results may have implications for men with prostate cancer who also have diabetes or early undiagnosed diabetes and for men with prostate cancer whose tumors have characteristics that make them sensitive to metformin, according to Joshua.

"This research builds on the hypothesis that metformin has a role in prostate cancer," he said. "Exactly what that role will be will depend on the results of the analysis currently being completed by our study team and others worldwide."

Joshua is particularly interested in better defining the precise mechanism of action and the subpopulation of patients with prostate cancer for whom metformin has the potential to improve outcomes.

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AACR 2012 特集

News01

予期せぬMEK1変異はメラノーマの薬剤耐性の原因ではない

News02

エストロゲンホルモン療法は乳がん高リスクと関連がある

News03

肝がん治療においてtremelimumabは有望である

News04

ステージ4のがん患者においては併用療法が有益な可能性がある

News05

メトホルミンは前立腺がんの進行を遅延させるようである

News06

新たな経口薬は前立腺がん治療として有望なようである

News07

肺がん治療薬ベバシズマブの代替薬

News08

膀胱がん治療としてのより優れたアジュバント免疫療法

News09

ホルモンレベルにより前立腺がんの生存率が予測できる

News10

骨髄異型性症候群および白血病に対する強力なエピジェネティック薬

News11

翻訳異常が、がんの進行に重要な役割を果たしている可能性がある

News12

アブラナ科野菜を食べることにより乳がん患者の生存率が向上する